



EIGHTEENTH YEAR, No. 9.

MILWAUKEE, SEPTEMBER, 1893.

\$1.00 per Year. 10c. per Copy.

THE EDW. P. ALLIS COMPANY,

➤ **Mill Builders and Mill Furnishers,** ➤

RELIANCE WORKS.

SOLICIT ORDERS FOR

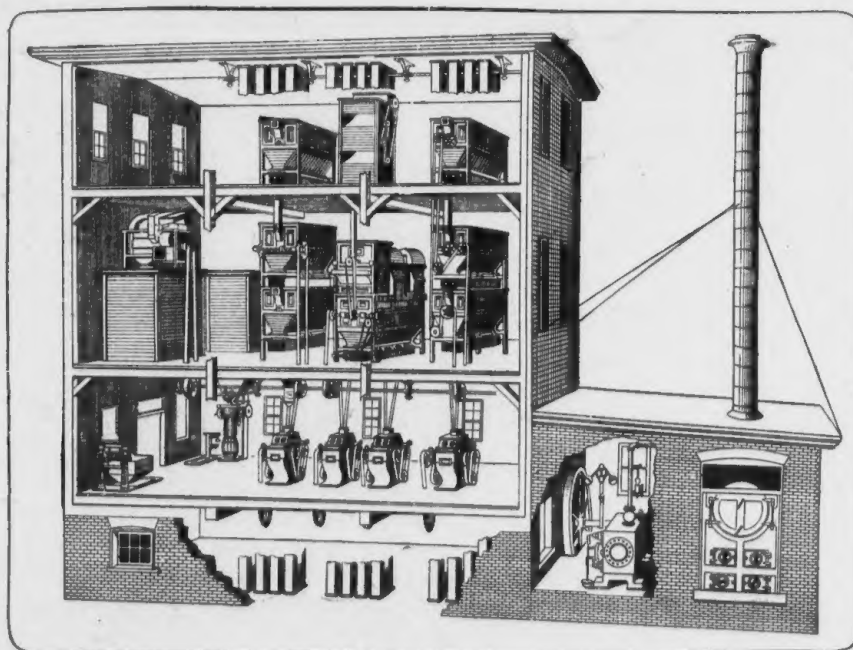
MILWAUKEE, WIS.

Complete Flour Mill Outfits of any Capacity,

WITH OR WITHOUT MOTIVE POWER.

ALSO FOR

Roller Mills,
Feed Rolls,
Screenings Rolls,
Reel Scalpers,
Sieve Scalpers,
Flour Dressers,
Centrifugals,
Air Purifiers,
Sieve Purifiers,
Dust Catchers,
Meal Purifiers,
Flour Feeders.



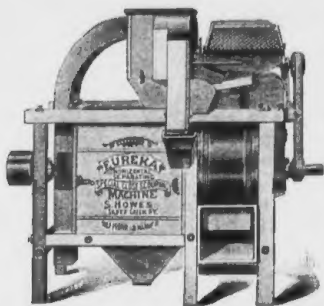
Wheat Cleaners,
Corn Cleaners,
Corn Shellers,
Bran Dusters,
Flour Packers,
Wheat Heaters,
Scales,
Bolting Cloth,
Shafting,
Belting,
Pulleys,
Gearing.

WE CAN FURNISH ANYTHING YOU NEED IN THIS LINE AT THE
LOWEST MARKET PRICES.

Send for Our 136 page Pocket Price List, which is Very Complete and Handy.

ALSO

OUR HAND BOOK "SMALL MODERN MILLS," CONTAINING ILLUSTRATIONS
AND DESCRIPTIONS OF MILLS FROM 25 to 100 BBL. CAPACITY.



THE EUREKA GRAIN CLEANING MACHINERY

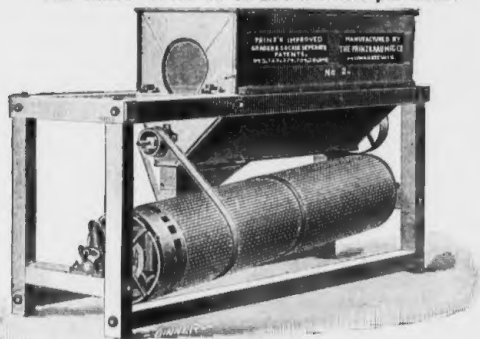
Stands admittedly at the head of all machines built for a similar purpose.

And WHY?

BECAUSE correct principles were embodied in them and correctly applying these principles, using the best materials and high grade labor, enabling us to build the best machines, and by fair dealings have built up the largest works of its kind in the World, shipping them to every part of the Globe where wheat is grown, and our annual sales exceed those of all others, and each year showing an increase over the one previous, affords indubitable evidence that the principles upon which the Eureka is built and operates, are in the broadest possible sense correct.

S. HOWES, Sole Builder, SILVER CREEK, N. Y.

Ten Sizes. From 15 to 230 Bushels per hour.



Slow Motion. Little Power. Small Space.

RECOMMEND THEM AS THE BEST

WASHBURN, CROSBY CO., Merchant Millers.

Minneapolis, Minn., March 4th, 1893.

THE PRINZ & RAU MFG. CO., Milwaukee, Wis.

In answer to your inquiry regarding the Prinz Cockle Separator would say: We have had 14 of your No. 3 machines in use in Washburn Mill "A" for the past three years, and can fully recommend them as being the best all round cockle separators we have ever used.

Yours Very Truly,

JAMES McDANIEL.

THE PRINZ COCKLE MACHINES

Are guaranteed to take out all Cockle, Garlic and similar seeds without wasting wheat.

ONLY MACHINE IN THE WORLD WHICH HAS AN INDENTED STEEL CYLINDER

SEND FOR CATALOGUE OF REDUCED PRICES.

THE PRINZ & RAU MFG. CO., - MILWAUKEE, WIS.

WM. & J. G. GREEY, TORONTO, ONT., Sole Manufacturers in Canada.

EXPORTING MILLERS

Send for copy of the New Edition of the

Riverside ... Cable Code

More copies of this work are in actual use to-day than of all other Flour Cable Codes combined.

PRICE OF SINGLE COPY, \$3.00

A proper discount will be made to parties ordering one dozen or more.



ADDRESS ALL ORDERS TO

Riverside Printing Company,

MILWAUKEE, WIS., U. S. A.

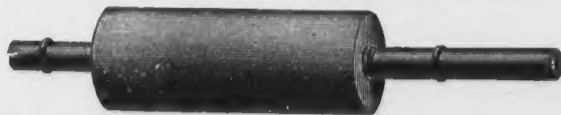
Send for circular, giving scope of the work and names of many prominent firms using it, in America and Foreign Countries.

Don't forget to mention this paper when you write.



FARREL FOUNDRY & MACHINE COMPANY,
ANSONIA, CONN.

Sole Manufacturers of the Celebrated



ANSONIA * ROLLS
FOR USE IN ROLLER MILLS.

The general experience of American Millers unites in pronouncing these Rolls the very best for Flouring Mill use.

• • These Rolls are now used in all Leading Flouring Mills. • •

CHILLED ROLLS FOR PAPER MILLS A SPECIALTY.

THE UNITED STATES Miller

EIGHTEENTH YEAR, No. 9.

MILWAUKEE, SEPTEMBER, 1893.

\$1.00 per Year. 10c. per Copy.

THE NEW PRESIDENT OF THE NATIONAL ASSOCIATION OF BRITISH AND IRISH MILLERS.

[By permission of *The Miller*, London.]

THE culminating event in each year's history of the National Association of British and Irish Millers is the election of the President for the twelve months' session, which Phoenix-like, is about to spring from the dying year's ashes. At its lately held fifteenth general meeting, the Association elected Mr. Edgar Appleby, senior partner in the well-known Lancashire milling firm of Joseph Appleby & Sons, to its supreme office. Mr. Appleby is the thirteenth President on whom has fallen the choice of the Association during its fifteen years of existence. The first President, Mr. Simeon Charles Hadley, served a double term; and Mr. R. H. Appleton has been elected to the chair on two different occasions. With regard to the new President, it is worth noting that the honor which now belongs to him was pressed on his acceptance as far back as 1889, when he was constrained by the heavy claims of his business, to withhold the acceptance that subsequent events have shown to be merely deferred.

Mr. Edgar Appleby may be described as a miller by inheritance, seeing that his family have been engaged in the ancient and honorable art of flour making for over two centuries. Mr. Joseph Appleby, his father, settled at Enfield Mills in Lancashire, in 1841, and at that place and in the same year, the subject of this notice was born. Having elected to follow the ancestral calling, he was early initiated into all the mysteries of the craft. When but a lad of seventeen, he used to be the regular companion of his father in his weekly trips to Leeds and Wakefield markets, and thus was, no doubt, laid the foundation of that thorough knowledge of wheat, which has done so much to place him among the foremost millers of Lancashire. In 1862, Mr. Joseph Appleby found his son so far advanced in the various branches of the millers' art, that he entrusted him with the responsible post of manager of his Accrington

mills, where he remained six years, gaining experience each day and perfecting himself in the difficult art of managing a mill. In 1868 he was transferred to the more responsible position of chief of the Burnley Mills, where he remained till 1873, when he was called to Blackburn to undertake the superintendence of the chief mill and central offices of the firm, and

came a member of the Town Council, but retired in 1879 on the bereavement he had experienced in the loss of his father. It was not till 1885 that he re-entered municipal life, when he was re-elected Town Councillor. In the following year he was elected by his fellow citizens to the highest office in their gift.

To the National Association of British and Irish Millers, the

of business, and the words he spoke, at the meeting of the Association, held in Liverpool, on the 15th day of November, last year, will bear quoting. Speaking of the practice of booking forward to bakers, a practice which, in a drooping market, such as then reigned in all England, is ever fraught with loss to the flour seller, he said: "Forward selling is a growing evil. Why a man with little more than £20 in his pocket, should become a speculator and buy, say, 500 sacks of flour forward, I really do not know. If the market goes against such an individual, he, of course, throws up his contract, under the excuse that the flour is below quality. The fact is, it is not that he will not take the flour, but that he cannot without being ruined. Every miller's salesman should be instructed to book only reasonable quantities of flour to ordinary customers, and if millers would but do this—if they would check the risks incurred by their subordinates and be content with fair profits, we should hear much less about bakers repudiating their contracts."

RANDOM THOUGHTS.

BY WANDERER.

HOW much will machinery depreciate in value, year by year? This is a question in which not alone the user is interested, but also the manufacturer and insurance companies.

In view of the fact that there are so many mills, with a great variety of equipments—some containing the very latest machinery manufactured and others using machines many of which are quite ancient—and yet producing very nearly the same kind of results, it would appear that in case of fire, the loss on one should be considered fully as great as that on another. It, of course, requires very shrewd management on the part of those in possession of a lot of old time machinery, to hold their own against their neighbors who have invested in everything that is new and novel, and the miller, by the way, who has an old outfit of this kind to contend with, may be regarded as a man worthy of his position. He has



MR. EDGAR APPLEBY.

here he has remained ever since.

Mr. Edgar Appleby is something more than a miller, he is one of the foremost citizens of the busy town which he has made the headquarters of his trade. He served his apprenticeship to public life in 1866, when he was elected a member of the Accrington Board of Health. Three years after his settlement in Blackburn he be-

came a member of the Town Council, but retired in 1879 on the bereavement he had experienced in the loss of his father. It was not till 1885 that he re-entered municipal life, when he was re-elected Town Councillor. In the following year he was elected by his fellow citizens to the highest office in their gift. Above all he is a thorough man

certainly taxed his brains to the utmost and may feel proud of his exertions. An old machine in place, doing good work, may be worth a fortune to a mill owner, but if taken out of the mill and placed on sale, may not find a purchaser who would take it at any price. In fact a second hand machine of any kind will hardly find a market anywhere in these days.

The value of a mill should be gauged according to its actual capacity, whether it be an old mill or one recently built. The chances are that the machinery in an old mill was bought while prices were very much higher than they are now. However, whether old or new the first cost should have nothing to do with the present valuation of a plant. New machinery is sometimes depreciated in value far below that of old machinery on account of being abused, or by being located in a mill in which the results are anything but satisfactory. A chain has the strength of its weakest link, likewise is it possible that the value of a flouring mill be largely governed by machines which produce the most inferior work.

There is one thing which is worthy of consideration from an insurance standpoint and that is how nearly the mill is arranged in accordance with the laws of fire risks. Ninety-nine mills in a hundred usually burn without the actual cause of the fire becoming known. It is usually attributed to one thing or another. A fire may be produced by a machine or portion of a mill which in itself may not be a fire trap. It, however, may ignite something else which may be the actual cause of the total destruction. There are more mill fires extinguished with buckets than otherwise. It may be taken for granted, therefore, that it is only in case where a fire has been arrested, immediately after having started that the true cause has become known. It, therefore becomes a matter worthy of consideration how nearly a mill is constructed according to the fire risk as held in view by insurance companies.

One thing that may be in favor of new machines is that all bearings are in plain sight, and where they can be approached and attended to with ease. However, it must be a very ancient machine that has any of its bearings under cover. There are clusters of power connections that may be greater risks than any one machine. A mill that is so cluttered up with machinery, making it difficult to get through many places, is anything but a desirable insurance risk.

So far as the actual deprecia-

tion of machinery is concerned, the wear and tear by constant use, cuts more of a figure than any other one thing, providing the operative miller does not follow up carefully the various defective parts as they appear. Five and ten per cent have been named as the figures to subtract from the valuation year by year. While this may appear to be an exceedingly large amount in some cases, in others it is small indeed. It is another case where the innocent are obliged to suffer with the guilty.

The manufacturer's interest in the depreciation in value of machinery is also quite considerable. If it were not that mill-builders are continually "hatching out" new wrinkles with which to improve the manufacture of flour a great many of them would cease to exist. Certainly not near all of them could remain in the field by depending on the new mills that are being built every year. In many cases, of course, the inventors of machines are millers, but it is but a comparatively short time until the mill-builders have taken hold of the new machine or device, providing it is a success, to push it for all it is worth.

SEPTEMBER CROP REPORT.

The September report of the Statistician of the Department of Agriculture shows a decline in the condition of corn to 76.7 from 87 in August and 93.2 in July, being a decline of a little more than ten points from the August and more than sixteen from the July report. The change is marked in nearly all the surplus corn States. The present condition is 75 in Kentucky, 64 in Ohio, 65 in Michigan, 59 in Indiana, 64 in Illinois, 96 in Iowa, 92 in Missouri, 74 in Kansas and 71 in Nebraska. In comparison with the September reports of the last ten years only three were lower, 70.1 in 1890, 72.3 in 1887, and 76.6 in 1886. In the same month in 1892 the condition was 79.6, or nearly three points higher than the present month. There has been general decline in the condition throughout the country which has been caused by the widely prevailing drought.

The condition of wheat, considering both winter and spring varieties, when harvested was 74, against 85.3 in 1892. The general average is lowest since 1885, when it was 72. The reported conditions for the principal wheat growing States are as follows: Ohio, 98; Michigan, 80; Indiana, 88; Illinois, 60; Wisconsin, 80; Minnesota, 65; Iowa, 85; Missouri, 64; Kansas, 42; Nebraska, 55; South Dakota, 66; North Dakota, 67; Colorado, 89 and Oregon, 93. In the East—New York, 76; Pennsylvania,

93; Maryland, 98; Virginia, 96, and Texas, 68.

In New England, Eastern and most of the Southern States the crop was harvested in good condition and the yield averaged well. The same can be said of Ohio. In Indiana the quality is good, but the crop light, while in Illinois, Missouri, Kansas and Nebraska the yield is small and of an inferior quality, much of it grading at No. 3 and under, and in some places reported worthless. In the Dakotas the yield is light, while the quality is generally good. In Iowa and Wisconsin the winter variety yielded well and was of good quality, while the spring variety yield was poor and of an inferior quality. In Minnesota the yield has been poor and not up to expectations; the quality generally good, with some complaint of shriveled grain. In California and Oregon the quality of the grain is good up to an average, and the yield has been good, except on lowlands, where it was greatly damaged.

There has been a further decline in the condition of oats during the past month, the general average standing at 74.9, against 78.3 in August. In September, 1892, it was 78.9.

The condition of rye is 82. Drought during the spring and early summer injured the crop.

Barley shows a slight falling off since last month, the general average being 83.8, against 84.6 in August.

EXPORT OF BREADSTUFFS FOR AUGUST.

The following, from the statement of the U. S. Bureau of Statistics, shows the amount and value of domestic breadstuffs exported from all American ports during the month of August, 1893, as compared with that for same month, 1892:

	1893.		1892.	
	Bush.	Value.	Bush.	Value.
Barley	1,236,144	554,363	270,591	138,708
Corn	6,486,510	3,280,891	2,352,084	1,346,940
Oats	515,237	169,739	150,000	66,361
Rye	78,028	44,512	148,049	111,363
Wheat	13,600,293	9,530,212	13,245,830	11,142,958
Total	21,958,212	13,647,723	16,174,824	12,805,000

In addition to above, the following were exported during the month of August, 1893: Corn meal, 24,541 bbls., value \$66,163; Oat meal, 679,581 lbs., value \$16,824; Wheat flour, 1,845,306 bbls., value \$8,124,518. For the eight months ending August 31, 1893 and 1892 the total valuation of breadstuffs exported was \$124,496,019 and \$166,239,917, respectively.

WORLD'S PRODUCTION OF WHEAT

The annual report of the Hungarian Minister of Agriculture has appeared. Its estimate of the world's production of wheat this year is 2,279,000,000 bushels, against the official average of 2,280,000,000 annually

for the last ten years. The report gives also the following figures: The deficits to be filled by importing countries will require 379,000,000 bushels. The surplus available in exporting countries to satisfy this demand is 378,664,000 bushels. The world's product of rye is given at 485,000,000 hectolitres.

The production of wheat and the deficit (amount needed above the domestic supply) in each importing country is given thus:

Country.	Production in bushels.	Deficit.
Great Britain	56,750,000	184,427,000
France	283,764,000	46,818,000
Germany	90,795,000	25,537,000
Italy	122,012,000	22,700,000
Netherlands	8,284,000	8,512,000
Switzerland	4,539,000	12,768,000
Belgium	15,816,000	24,118,000
Denmark	4,256,000	3,688,000
Norway and Sweden	4,823,000	2,270,000
Spain	76,812,000	8,512,000
Portugal	5,675,000	5,675,000
Greece	4,255,000	7,377,000
Austria	45,400,000	39,725,000

The production and surplus in each exporting country are given thus:

Country.	Production in bushels.	Surplus.
Russia	342,935,000	97,863,000
Hungary	341,370,000	45,400,000
Romania	46,818,000	34,050,000
Turkey	28,375,000	5,675,000
Bulgaria	31,977,000	10,782,000
Servia	8,512,000	3,405,000
United States	397,250,000	68,518,000
Canada	45,840,000	9,831,000
India	274,835,000	42,562,000
Rest of Asia	65,282,000	7,068,000
Africa	36,716,000	3,688,000
Australia	39,725,000	19,286,000
Chile	56,750,000	26,105,000
Colt., etc.	4,823,000	6,582,000

Department of Agriculture says also that as much maize, oats and barley will be needed to take the place of fodder destroyed by the drought, the consumption of wheat and rye is likely to be unusually large. High prices, therefore, are likely to rule when the American shipments to Europe cease.

The Hungarian crop report is not always correct in details. The report to be issued in Vienna is regarded as more trustworthy.

The crop report of the Austrian Government, given out March 28, estimates the yield of wheat in Austria as 14,000,000 meter-centner, or, taking 100 as the average, as 88.8 per cent. The yield of wheat in North America is estimated at 382,000,000 bushels; the yield of rye as 24,333,000 bushels, and the yield of maize as 1,809,000,000 bushels.

PAINT FROM POTATOES.

Paint from Potatoes is a new wrinkle in the arts of sciences. *Kuhlow's Trade Review* gives the manner of preparation: Boil a kilo (2½ pounds) of peeled potatoes in water; after mashing, dilute with water and pass through a fine sieve. Add two kilos of Spanish white diluted with four kilos of water and the result will be a color of beautiful milk white. Different colors can be affected by the addition of different ochres or minerals. Apply with brush; it adheres to plaster and wood very well, will not peel, and best of all, it is cheap.

ORGANIZATION OF MILLERS IN THE UNITED STATES.

THE MILLERS' NATIONAL ASSOCIATION.

President—C. B. COLE, Chester, Ill.
 1st Vice-President—A. C. LORING, Minneapolis, Minn.
 2d Vice-President—B. F. ISENBERG, Huntingdon, Pa.
 Treasurer—S. H. SEAMANS, Milwaukee, Wis.
 Secretary—FRANK BARRY, Milwaukee, Wis.

BOARD OF DIRECTORS.

STATE.

D. S. Shellabarger, Decatur.....ILLINOIS.....
INDIANA.....
 C. R. Underwood, Salina.....KANSAS.....
 F. H. Macgill, Baltimore.....MARYLAND.....
 *W. A. Coombs, Coldwater.....MICHIGAN.....
 *Chas. J. Martin, Minneapolis.....MINNESOTA.....
MISSOURI.....
 C. C. White, Crete.....NEBRASKA.....
 *Geo. Urban, Jr., Buffalo.....NEW YORK.....
N. DAKOTA.....
 Homer Baldwin, Youngstown.....OHIO.....
 W. Latimer Small, York.....PENNA.....
S. DAKOTA.....
 *S. H. Seamans, Milwaukee.....WISCONSIN.....
 *Members of Executive Committee.

OFFICERS OF STATE ASSOCIATIONS.

President, E. C. Kreider, Jacksonville.
 Secretary, C. H. Seybt, Highland.
 President, F. E. C. Hawkes, Goshen.
 Secretary, E. E. Perry, Indianapolis.
 President, E. A. Colburn, McPherson.
 Secretary, C. V. Topping, Enterprise.
 President, P. H. Macgill, Baltimore.
 Secretary, J. O. Norris, Baltimore.
 President, W. E. Knickerbocker, Albion.
 Secretary, M. A. Reynolds, Lansing.
 President, F. L. Greenleaf, Minneapolis.
 Secretary, S. M. Carter, Hannibal.
 Secretary, H. C. Craft, St. Louis.
 President, O. A. Cooper, Humboldt.
 Secretary, D. H. Harris, Bennett.
 President, A. K. James, Buffalo.
 Secretary, H. F. Shuttleworth, Buffalo.
 President, J. S. Hillyer, London.
 Secretary, G. H. Winters, Grand Forks.
 President, M. H. Davis, Shelby.
 Secretary, L. C. Miles, Akron.
 President, Cyrus Hoffa, Lewisburgh.
 Secretary, L. Levan, Lancaster.
 President, B. H. Kutniewsky, Redfield.
 Secretary, C. Lunn, Aberdeen.
 President, E. J. Lachman, Neenah.
 Secretary, L. R. Hurd, Milwaukee.

A NEW COMMERCIAL OPPORTUNITY.

THE following from the September, 1893, Consular Reports is from Consul-General Frank H. Mason, Frankfurt, Germany, under date of August 2, 1893: Readers of European politics are generally aware that during the past two months a serious disagreement has occurred between the governments of Russia and Germany in respect to a commercial treaty between the two countries, and that as a result negotiations were broken off, and Russia decreed against Germany a retaliatory tariff in which all existing import duties should be advanced 50 per cent. Germany promptly retorted by declaring a similar increase of 50 per cent in the duties on all imports from Russia. These two measures, which took effect simultaneously, August 1, have practically suspended commerce between the two countries in several important classes of merchandise.

Under the best possible circumstances, and even with good will on both sides, the present German embargo against Russia cannot be modified by the adoption of a new treaty until the meeting of the Parliament at Berlin in November, by which time most of the rivers and canals of Russia will be closed to navigation, leaving the transportation of freight exclusively to the railways, whose rates for long distances, especially in Russia, are practically prohibitory for grain and coarse products of all kinds. The Russo-German commerce for the coming autumn and winter must therefore practically cease or struggle along under a 50 per cent increase in the already high import duties exacted by both countries upon even such articles as food and other necessities of life. Amer-

ican producers and exporters will do well to examine somewhat critically the nature and extent of the opportunity which is thus suddenly opened to products from the United States.

The first requisite to such an examination is a synopsis of the quantity and character of the merchandise which has hitherto been exchanged between Germany and Russia. Not all the statistics of last year's commerce are yet available, but it is known that in 1892 Russia sold to Germany rye valued at \$21,420,000, besides 300,000 barrels of refined petroleum and 78,000 barrels of petroleum products, mainly lubricating oils, which are largely used by the German State railways. In other respects the Russo-German trade of 1892 did not differ essentially from that of 1891.

The pertinent question in this connection is how much of the vast total the United States will be able to furnish at prices within the artificial limit now established by the retaliatory tariffs, which, so far as they go, are enactments by both Germany and Russia in favor of all other producing countries, and notably the United States.

As to petroleum and petroleum products, it may be assumed that nearly the entire supply which Germany has hitherto derived from Russia will be imported, so long as the present status continues, from the United States. Already a large order for lubricating oils has been placed with the agent of an American firm by the purchasing agent of the Prussian State railways, which have hitherto purchased their entire supply in Russia. In 1892, which was agriculturally a fair average year in Germany, this country imported from Russia, as we have seen, \$21,420,000 worth of rye alone. This year the deficit in the

German home crop is greater than in 1892, and the demand will be proportionately increased. Rye is a cereal which it is always difficult for German importers to find in large quantities elsewhere than in Russia, so that it may be safely assumed that every bushel of rye that the United States can spare, from now until next July, will find a ready market in Germany. (Note by the Department.—The United States exported to Germany during the last fiscal year 3,965,191 bushels of rye, 13,901,239 bushels of corn, and 7,635,926 bushels of wheat.)

How seriously the present advance of the grain tariffs will affect Russian exports to Germany will be evident when it is considered that the ordinary German import duty on rye and wheat is 5 marks per 100 kilograms, equal to 32 cents per bushel. Add to this the present retaliatory increase of 50 per cent, and we have a duty of 48 cents per bushel, or a difference of 16 cents per bushel in favor of the United States, India, and such other nations as have a surplus of rye and wheat to sell.

It will be noticed that the imports from Germany into Russia have been, hitherto, largely manufactured goods, whereas German imports into Russia have been principally of the nature of raw materials. The import duties on most of them are already so high, in both countries, that a 50 per cent increase will be practically prohibitory, provided the supplies which each has hitherto imported from the other can be reasonably obtained elsewhere. Here, then, is a new and timely opportunity which American producers and exporters will assuredly not fail to study and improve.

WEATHER CROP BULLETIN OF THE WISCONSIN WEATHER SERVICE.

[For week ending Tuesday, Sept. 12th, 1893]

U. S. DEPT. OF AGRICULTURE,
 WEATHER BUREAU,
 Bulletin No. 22.

Drought continues, with no immediate prospect of abatement. In some places corn has dried up, in others it is a good crop. Cutting is vigorously prosecuted and it will nearly all be in the shock by the end of this week. On the whole the crop will be below the average.

Potatoes have suffered more than any other crop as a result of the drought, and the crop which, on July 1st, showed such wonderful promise, has matured not over two-thirds of a crop and possibly the yield when measured up may not exceed one-half.

Pastures are gone, and dairy-men are feeding nearly as much as in winter in order to keep up the flow of milk.

But little plowing and seeding of winter wheat has been done, and that which has been sown has not enough moisture to germinate and grow.

Fires have done much damage, especially to cranberry marshes in the vicinity of Meadow Valley and Bearss Marsh, four of the most valuable marshes at the latter place being burned over.

While the loss by frost to the cranberry crop was great, picking shows that the first reports of damage were a little excessive, and that one-half of a crop will be gathered—probably two-thirds.

Tobacco is being harvested as fast as it ripens and there are some good pieces. The late fields will depend on the weather, but it is not probable that an average yield will be secured. But, considering the unfavorable weather during much of the growing season, the crop is better than would naturally be expected.

The average rainfall for the past week is about .68 of an inch. Not even a shower is reported from any part of the State. This is the first week this season that none of our numerous correspondents have reported rains.

WILLIS L. MOORE,
 Local Forecast Official,
 Weather Bureau Director.

SUIT OVER A TRADE MARK.

Papers in a suit by the Pillsbury-Washburn Flour Mills Co. of Minneapolis, have been filed in the Circuit Court at Mankato, Minn., against the Marshall Milling Co. of Marshall, Minn. The complaint alleges that the Pillsbury-Washburn Company and its predecessors, the firm of Charles A. Pillsbury & Co., have used a certain trade mark, constituting the brand well known as "Pillsbury's Best," for flour for the past twenty-five years. The trade mark consists of the word "Best" of a peculiar form of lettering, which was designed and invented for C. A. Pillsbury & Co., and has been used by them exclusively for many years. It is claimed that they have had undisputed possession of the trade mark until very recently; that the Marshall Milling Company has appropriated the trade mark and is using it on flour of its manufacture. The bill asks for an injunction to restrain the use of this trade mark by the Marshall Company, for an account of profits made and for damages. The bill also states that the Pillsbury-Washburn Company holds this trade mark at a valuation of \$1,000,000.

SEND for a copy of Cawker's American Flour Mill and Grain Directory for 1892-3. Address, THE UNITED STATES MILLER, 68C Mitchell Bldg., Milwaukee, Wis.

THE WORLD'S WHEAT CROP, 1892-93.

SEPTEMBER 15TH, 1893.

Dictated by G. J. S. B.

The Editor of the United States
Miller, Milwaukee, Wis., U. S. A.

DEAR SIR:—The trade is sufficiently depressed without being further demoralized by the publication and world wide distribution of such a report as that lately issued by the Hungarian Minister of Agriculture. I have been requested by some of the leading merchants here to point out some of the inconsistencies and inaccuracies contained in the report. I shall feel much obliged if you can find room for enclosed, or a summary of same in your valued columns. Believe me, dear sir,

Faithfully yours,

GEO. J. S. BROOMHALL.

The following letter has been addressed by the Secretary of the Liverpool "Corn Trade News," to the Editor of the London "Statist," one of the leading British financial papers:

DEAR SIR:—Your last issue contained an account of the World's Wheat Crop as estimated by the Hungarian Minister of Agriculture lately published in Vienna, your criticism of the various items was on the whole just and evinced a tolerably close acquaintance with the statistics of the trade with which I am semi-officially interested so far as the Liverpool Corn Trade Association is concerned.

The extraordinary estimate of the Russian crop of 1893 did not escape your notice, and you very naturally questioned the accuracy of the implied surplus, seeing that a crop of 123,000,000 bushels larger than that of last year is only deemed capable of furnishing 27,000,000 bushels more for the export trade.

The Russian crop of last year according to the final official return, issued last February, was 256,000,000 bushels, not 219,000,000 bushels, the Hungarian Minister having given, in palpable error, the figures for the crop of 1890 as everyone can easily see on referring to the return published in the Russian official journal. This is only one instance exemplifying the carelessness with which the Hungarian Minister compiled his estimate. With regard to his excessive estimate of this year's crop, viz., 342,000,000 bushels, it is only necessary to refer to the last Russian official report, bearing in mind the official estimates of previous years to see how wild a guess the Hungarian Minister has made. The latest official report upon the Russian crop was as follows: Winter Wheat, about average. Spring Wheat nearly everywhere good, in some districts even in excellent condition.

The wheat crops raised in Russia and Poland of recent years have been as follows:

Final Official Returns.	
Bushels.	
Harvested August, 1892.....	256,000,000
" " 1891.....	175,000,000
" " 1890.....	219,000,000
" " 1889.....	207,000,000
" " 1888.....	312,000,000
" " 1887.....	280,000,000
" " 1886.....	168,000,000
" " 1885.....	184,000,000

Average 8 years..... 225,000,000

It will be seen that an average crop of 225,000,000 bushels is the general rule, and there is no warrant for looking for one far above this figure this year, certainly if 250,000,000 or 270,000,000 bushels were allowed it would be a fair deduction from the latest data before the trade.

The account of the deficits of the importing countries are also very wide of the mark, as your readers may see from the following parallel columns, where the actual official imports for 1892 are given in comparison:

Hungarian Minister's account of the deficiencies of the cereal year 1892-3	
Bu.	
U. S.	161,737,000
France.....	42,000,000
Germany.....	15,000,000
Italy.....	29,794,000
Holland.....	11,250,000
Switzerland.....	13,768,000
Belgium.....	14,188,000
Denmark.....	1,986,000
Norway & Sweden.....	2,270,000
Spain.....	2,857,000
Portugal.....	4,256,000
Greece.....	10,215,000
Austria.....	25,537,000

Total 334,544,000

I will not trespass further on your space to expose the obvious error in reckoning the great Argentine wheat Crop of 1893 as on a level with 1892, nor many other equally surprising errors. The Hungarian estimates are not only worthless, but mischievous, and you will much oblige if you can find space in your valued columns for these remarks.

I enclose a report upon the Russian crop dated 5th inst. specially furnished by a Russian official.

Believe me, Dear Sir,

Faithfully yours,

(Signed) GEORGE J. S. BROOMHALL.

RUSSIAN CROP REPORT.

Special to Corn Trade News from a Russian official.

It is impossible at present to give even an approximate estimate of this year's Wheat crop in Russia. Up to time of writing nothing definitely reliable is known. In some provinces the yield is abundant, grain sound, and of a high quality other provinces quantity above average, but quality poor and of light weight; others again, straw very plentiful, but comparatively little grain; in others again, the yield on field was a fair quantity, but quality considerably suffered from wet weather and the grain having been lost on the ground. The results of the threshing, so far, have only been received from a few of the centres.

To estimate approximately for this year is, moreover, doubly difficult, as the area sown of Winter Wheat having considerably suffered, has been resown with Spring crops, and so far no reliable information has been received as to the area thus resown; therefore it is not advisable to make any estimate even from previous years. The department of Agriculture made a trial to estimate the Rye crop, but found such great difficulties in the way that it acknowledged the figures as totally unreliable. From information received from the various interior provinces the harvest will not be so abundant as was generally calculated. The general impression among growers seems to be "the harvest will be what is called heavy straw and little grain."

A BRITISH VIEW OF THE CROP SITUATION.

It may be somewhat selfish to put the matter in such a light, but there is certainly a grain of comfort to the British miller to be found in the circumstance that America this year has, according to the recent crop estimates of the Washington Agricultural Bureau, produced very little more wheat than they will require at home, viz., less than 400 million bushels. This of course means that, unless the American authorities are seriously in error, American millers will not be in a position to flood us with their flour, for the simple reason that the wheat will not be forthcoming. True

it is that there are large stocks of old wheat on hand, probably 75 million bushels; but that is a very moderate total compared with the actual exports of the past two seasons, viz., 192 million bushels in the past season, and 225 million bushels in 1891-92. During the past season ended June 30, no less than 16,620,000 barrels of flour, representing nearly 75 million bushels of wheat were exported, of which 10,361,860 barrels came to the U. K., and 1,549,000 barrels to other European countries. To keep up this rate, nearly every bushel of wheat available for export to Europe in the present season of 1893-94 will have to be sent in the shape of flour, a thing manifestly impossible. The British miller may, therefore, pluck up courage—if he has ever lost it—for it is as certain as such matters can be, that the competition of American flour will be less severe in the coming season than in either of the two previous ones. At present, it is true, there are no signs of any falling off, for since August 1, no less than 200,000 sacks per week have been sent to Europe. A somewhat pertinent comment upon the past year's export business of some American millers, is to be found in the fact that the £10 shares of a well-known large American joint stock mill are to-day not worth more than £2 to £3.—*Millers' Gazette*, London.

ARGENTINA AS A SOURCE OF WHEAT SUPPLY.

The agricultural condition of the Argentine Republic is the subject of a recent English consular report. Mr. W. S. H. Gastrell, the writer, refers to the rapid development of Argentina from an almost purely pastoral to a cereal-producing country, pointing out that, while in 1880 the Republic imported 177,000 tons of wheat, it has this year a surplus available for export of 1,040,000 tons. He remarks further that, geographically considered, the country is remarkably well adapted for the cultivation of cereals. Its vast cultivable areas and the extensive facilities for transport provided by its railway system, render its potentialities as one of the sources of the food supply of Europe a subject of considerable interest. For the present year the total area under cultivation is estimated at 12,500,000 acres, and the possibilities of extension may be judged from the statement that the area said to be suited to cultivation in the whole country is about 240,000,000 acres. As the distance to ports of shipment from the tracts at present under wheat crops is usually short, it can be produced and shipped at an exceptionally low cost, this depending very much, Mr.

Gastrell says, upon whether the colonist and his family perform the work themselves or have to pay for hired labor. A calculation is made, based upon the average yield of one ton from two and one-half acres, that, allowing for all expenses of transport, etc., the wheat, if sold in Europe at about 22s per quarter, would return a net profit of about 4s 6d per quarter. The price mentioned is considerably below the lowest yet reached in England, and as the quantity available for export is already sufficient to make it an appreciable factor in calculating the total food supply, the progress of this comparatively new competitor in the world's markets will be watched with increasing attention.

SOME NATIONAL DEBTS.

The public debt of the United States is very small compared with those of some other leading nations, being less than \$1,000,000,000, while that of Great Britain is about \$3,250,000,000 and that of France \$6,500,000,000, exclusive of the debts of the departments, amounting to \$750,000,000, which are guaranteed by the central government. Our little neighbor to the north, Canada, owes \$250,000,000 which is a burden nearly as heavy per capita as that of the mother country. Our own public debt has been very rapidly reduced since the close of the civil war, being about \$2,770,000,000 in 1867, or nearly three times as large as at present. Its reduction is steady, and the national credit is now sustained beyond all precedent.

The debt of Great Britain, which was greatest at the close of the Napoleonic wars, then amounting to \$4,000,000,000, is now \$3,250,000,000. The present annual reduction is \$30,000,000, at which rate the debt will be extinguished in less than one hundred years.

The French, however, bear the heaviest burden of civilized nations, as its enormous debt shows a total twice as large as that of England, with a per capita of \$170 against \$80 in England and \$15 in this country. Its debt however is due to its own people, and constitutes a national savings bank wherein their earnings are deposited for security and as a source of income. There are few opportunities for profitable investments in private or public enterprises in France; and the national debt is, therefore, a national blessing, or rather it has been made to approximate that relation to the thrifty industrious population as far as possible under the circumstances.—*N. O. Democrat*.

SEND for a copy of Cawker's American Flour Mill and Grain Elevator Directory for 1892-93.

SEPARATIONS.

[Paper read by Mr. James Newby at the sixteenth annual convention of the Pennsylvania Millers' State Association, held Sept. 12 and 13.]

In looking over the past history of milling methods, from 1850, when the millstone was used, with its one reduction, hopper-boy, shoe-feed, knockers and reels forty inches in diameter with different grades of cloth, making all the separations on the same reel, and following up the stages to the present time, I see that our advancement is, indeed, wonderful. A miller must be continually on the alert to keep up with the march of progress, or he will awake some fine morning to find his neighbor ahead, and his trade gone. Our countrymen are growing more refined in their tastes and are always looking for the best goods on the market.

To hold trade we must make flour uniform in quality; the mill must be kept in perfect order, the rolls, reels and cloths nicely adjusted and frequently looked after, while special attention should be paid to the grain-cleaning department, so often neglected. To produce good flour it is of the utmost importance that we have sound, well-cleaned grain of the proper mixture to give the desired results. Upon receiving a load of wheat, note the locality in which it was raised, and the quality, soft or hard. Weigh, and send it to a good machine for separating light materials, then to the weighing hopper and a second cleaner for final purifying before conveying it to the proper bin. The storage system should be so arranged that each grade may be separate, to be drawn from according to the mixture needed in the quality of flour to be made. Having selected such a mixture as is required, run it to the magnetic separator, then to the milling separator, scourer, brush and rolling screen with fan attachment.

We have now arrived at our first reduction. This should be carefully made, as the systems used will control the reductions in the mill. They are three in number, the short, medium and long, all claimed to produce good results. Mine will be for a five to six-break on grain, with ten or more on the remainder of the stock. If you have a five-break mill start with from ten to twelve corrugations per inch, and break down quite hard, so that you may produce ten or twelve drachms of flour and middlings per ounce of break stock. To obtain the best results from breaks, and to equalize the amount of work done by them, I have found it advisable to use a small scale for testing the breaks. It requires a little time to weigh and separate, but it pays. I have, also, a scale for weighing the flour and water used in doughing. After a few trials one can detect very quickly whether the mill is working softer than usual, the wheat changed in quality, or the millers grinding closer than they should.

The short system requires simpler bolting methods than the medium or long. This is not because it is short, but because the reduction made is. All the material is soft, and the middlings finer and less. Less scalping is required as the grades of stock are less. Gradual reduction means a longer system; the flour made is incidental. The short system disregards the making of middlings, to a great extent, and presupposes more flour. On the first reduction there are two short systems, one retaining the middlings idea, the other rejecting it. The gradual reduction method refrains from making flour until it reaches the fourth, fifth and sixth reductions, making all the middlings possible on the former reductions and begins to

make its best flour after it has started on the middlings.

The difference between the systems is: That in the gradual we are not in as great haste to reduce our middlings as in the short. The long produces as large an amount of middlings as possible, the short more flour; the latter, of course, requires fewer separations. The material, also, differs in character; the middlings are fewer and finer. Sizings are but little known, as, in reduction by the short method, they are, practically, done by the breaks. The long system retains the middlings idea and continues purifications and separations. By this plan we have larger germ middlings to be sized and separated. In reducing these germ middlings care should be exercised in having a good separation of the product. The head of this reduction can go to the patent. If it be desirable, the next cut-off may be sent to the reel for dusting, so that the finer middlings may go the purifier, the cut-off near the tail to the A sizing rolls and the next to the second, the tail going to a duster.

We must have a correct and uniform feed. If it is not, an uneven stock is produced, and low grades are multiplied. Our first rolls were crude in this respect. The most perfect feeding device for breaks is a vibratory apparatus, the stock passing over tables and spreading itself in uniform sheets. It needs very little attention and gives a nicer granulation, with more perfect separations. This is most important, though three-fourths of the millers do not appreciate the fact.

Milling is still in a state of evolution. The systems in use at present will be superseded, I feel assured; rolls will still be used, but great strides will be taken in the handling of the stocks and their purification. As we are getting more perfect dust collectors I think we may soon begin to elevate our stocks with air. I used this method in 1866 with success, in cooling the flour and giving it a better color. Our millers are far ahead of the Europeans, being quicker to see an improvement and to take advantage of it. The period of secrecy in milling is past. The system now in use, of reductions and separations, has been brought to the front and investigated. Practice has given us a good system, though it still leaves much to be desired. In all our reductions and separations we should avoid sending the stock too far in elevators and conveyors, as this wears off particles and produces a soft, pasty flour.

I do not purpose to say which system is preferable. To work any correctly one must understand all of its points, and the mill. It would be folly for a miller to reduce his stock in a long system mill upon the same lines as in a two or three-break system. Of course, the use of the former admits of greater skill in the manipulation of separations, while the latter grinds the stock to death as fast as possible.

It is a very easy thing to spoil the good working of a mill by an improper adjustment of the rolls, or by neglecting purifiers and separators. Millers sometimes allow good middlings to get to the end of the mill by not grinding properly, or by not watching all the separations. I would suggest that all millers, when they have nice, clean middlings, should get them into the flour by the shortest route possible. I prefer a finely-corrugated roll for this work, as it gives more flour at one reduction, and leaves more granular stock for further purification and reduction. Moreover, I make the separations such as to enable me to use about the same numbers of cloth for all of my flours.

It will be impossible for me to fix a definite system of bolting and scalping with the necessary separations, as long as we have so many different modes of milling. Whatever system you use, look well to your corrugating; keep the rolls in perfect trim, having the journals fit closely in long bearings, with large pulleys, wide belts and good differentials. Have the rolls dressed often, and, with an attentive miller, you cannot go far astray. Never allow him to run the rolls so as to flake the stock; always grind so that you can feel its granular condition, which should be lively. Bolt and separate freely, as by this means we obtain a better body to the flour. This holds good throughout the mill. If you are running on the middlings idea, I would use the saw-tooth corrugation back to back on the first reduction; on the second, the saw tooth running sharp to sharp; on the third, a compromise, the saw tooth on one roll, and a corrugation between a round and a sharp on the other. This reduction is as far as I draw good middlings for the first purifier for the best grades of flour. The remainder of the reductions are made by saw tooth rolls running back to back. The rolls should have a good motion, with a differential of two and a half, or three, to one. After the separations are made, before blending the grades, I would recommend that the flour be run through air currents to cool and bleach it. The successful miller is a man of broad views and advanced thought. He does not cling to old ideas of separations, neither does he adopt all the new wrinkles. He looks about him, reads, investigates and compares. As I have said, we are in a progressive age, and the profitable way is to keep up with the procession.

RECEIPTS OF WHEAT.

The following table shows the receipts of wheat at the winter wheat markets for 12 weeks, from June 26 to Sept. 16, 1893, with comparisons with two previous years, in bushels, as compiled by The Cincinnati Price Current:

	1893.	1892.	1891.
St. Louis.....	6,235,000	12,057,000	11,585,000
Toledo.....	5,813,000	13,802,000	12,968,000
Detroit.....	3,200,000	3,084,000	3,446,000
Kansas City.....	4,018,000	9,196,000	4,299,000
Cincinnati.....	444,000	951,000	1,428,000
Winter Wheat.....	19,740,000	40,090,000	33,726,000
Chicago.....	5,423,000	17,792,000	20,221,000
Milwaukee.....	2,247,000	4,208,000	1,835,000
Minneapolis.....	8,293,000	11,705,000	9,027,000
Duluth.....	7,053,000	5,769,000	5,725,000
Spring Wheat.....	22,978,000	39,558,000	36,808,000
Winter Wheat.....	19,740,000	40,090,000	33,726,000
Total 12 weeks.....	42,718,000	79,648,000	70,534,000
Winter, past w'k.....	2,541,000	3,671,000	3,772,000
Spring, past w'k.....	3,285,000	5,038,000	6,512,000
Total, week.....	6,206,000	8,679,000	9,584,000
Previous week.....	4,811,000	8,326,000	7,954,000

MINNEAPOLIS.

1890.....	43,488,320
1891.....	51,703,955
1892.....	72,023,160
1893.....	64,952,550

These figures represent the number of bushels of wheat received in Minneapolis for each of the four crop years, 1890, 1891, 1892 and 1893, says the *Tribune* of August 31.

The year closes with Aug. 31. The figures for this year are actual up to and including the 20th. The last two days of the month are estimated, but the actual figures can vary but little, at the best, from the estimates. For all practical purposes they are as complete as they will be two days hence.

The receipts of wheat were in round numbers 7,000,000 bushels less than in 1892, which was a phenomenal year, but are very largely in excess of those of any other year in the city's history. The flour shipments were within a few thousand barrels of those of the preceding year.

The receipts of wheat and flour for the year ending Aug. 31, 1893, with two days estimated, are:

WHEAT.	
Receipts, Shipments,	
bu.	bu.
September.....	5,765,980
October.....	10,569,580
November.....	9,681,380
December.....	8,088,630
January.....	4,250,470
February.....	3,736,690
March.....	4,749,130
April.....	2,380,840
May.....	4,088,670
June.....	4,210,060
July.....	3,140,670
August (including 29).....	1,699,970
Aug. 30 and 31, (est.).....	161,000
Total.....	64,952,550

FLOUR.	
Receipts, Shipm'ts,	
Bbls.	Bbls.
September.....	10,536
October.....	23,158
November.....	28,073
December.....	39,941
January.....	25,074
February.....	36,297
March.....	35,759
April.....	35,325
May.....	17,437
June.....	8,896
July.....	7,630
August (including 29).....	6,144
Aug. 30 and 31, (est.).....	500
Total.....	278,740

The receipts and shipments of wheat and flour for the past three years were:

	Wheat Receipts,	Wheat Shipm'ts,
1891.....	64,952,550	17,603,100
1892.....	71,949,730	26,459,870
1893.....	64,952,550	17,603,100
	Flour Receipts,	Flour Shipm'ts,
1891.....	69,523	7,090,391
1892.....	92,322	9,120,590
1893.....	278,740	8,069,562

LAKE WHEAT TRADE.—“So far as the commercial interests of Philadelphia are concerned,” the *Record* says, “the direct connection with the lakes by way of the Pennsylvania and the Philadelphia and Erie lines might as well never have been made. For the season of open inland navigation until the end of August the movement of wheat from Western lake ports to Buffalo aggregated 43,282,000 bushels, and to Erie 3,064,000 bushels. In the following two weeks, to Sept. 15, not a bushel of wheat was received at Erie, while the additional arrivals at Buffalo in that period were 3,320,000 bushels, or a total in a single fortnight larger than the whole season's shipments to Erie.

“Philadelphia merchants naturally depend upon the movement via Erie for a large percentage of the lake grain shipments which had an outlet through this port. The figures above given should suggest an inquiry into the cause of this sudden cessation of the wheat receipts at Erie, particularly as the stoppage occurred when money conditions were on the mend and the disturbances of exchanges no longer imposed an obstacle upon local operations in the Western grain markets.”

THE GENERAL FIRE EXTINGUISHER COMPANY,

AUTOMATIC * SPRINKLERS

OF FREDERICK GRINNELL, WILLIAM NERACHER, JOHN HILL, WILLIAM KANE and others.

An association of the leading Sprinkler Companies, with shops conveniently located and thoroughly equipped for executing work at fair prices in all sections of the country.

Reliable Sprinkler Systems, both wet pipe and dry pipe, promptly installed in conformity with the best known methods

INFORMATION AND PROPOSALS FURNISHED AT THE SEVERAL DEPARTMENT AGENCIES:

NEW YORK, 418 Broadway.
PHILADELPHIA, Mutual Life Building.
CHICAGO, 226 LaSalle Street.
CLEVELAND, Society for Savings Building.

BOSTON, 178 Devonshire Street.
BUFFALO, City Bank Building.
ST. LOUIS, 808 Rialto Building.
Also at WARREN, O., and COLUMBUS, GA.

AND AT THE

EXECUTIVE OFFICES. - PROVIDENCE, R. I.

HENRY W. BRACKETT, Department Agent.
B. W. DAWLEY, Gen'l Supt. Western Department.

226 LaSalle Street,
CHICAGO, ILL.

News.

L. BANKS HOLT will build a roller process flouring mill at Mebane, N.C.

JOHN E. DELSONER will erect a new flouring mill at Ashboro, Ind., this fall.

HORN BROS. of County Line are building a flouring mill in Mocksville, N. C.

J. T. SHANNON & Co. have sold their mill at Butler, Mo., to H. I. Henton & Son.

TENNANT BROS. of Northfield, are to operate the mill just completed at Dundas, Minn.

WALKER & CARSON will establish at Carmen, Man., a large flouring and oatmeal mill.

The recently-burned Greenfield Flouring Mills in Buckeystown, Md., will be rebuilt.

At Merced Falls, Cal., Aug. 24, Nelson & Son's flour mills were burned. Loss \$25,000.

N. COCHRAN & SON's recently-burned flouring mill at Rock Mart, Ga., will be rebuilt at once.

RABBETH & DUNLAP are erecting a grain elevator at their flouring mill at Clarkville, Tenn.

THE Union Elevator at Louisville, Ky., was destroyed by fire Aug. 31. Loss \$20,000; insurance \$8,000.

STONE & LYONS will immediately rebuild their burned flouring mill plant at Point Pleasant, W. Va.

At Chaska, Minn., Aug. 27, fire destroyed the flouring mills of Eitel Bros. Loss \$30,000; insurance \$10,000.

At Indian Head, Man., Sept. 7, the flour mill, elevator and engine house of the Bell farm was burned. Loss \$25,000.

At Strathroy, Ont., Aug. 23, Pincombe's oatmeal mill, a frame building, was burned. Loss \$10,000; insured for \$6,000.

BIDS for the erection of a two-story brick flour mill, with basement have been asked for by the town of Bridgeport, Wash.

At Richmond, Mich., Aug. 23, the Magic Flouring Mill, owned by H. S. Ballentine, was burned. Loss \$1,500; insurance \$800.

At Cowden, Ill., Aug. 17, the grain warehouse of D. Keeler & Sons, was burned, with its contents. Loss \$4,000; insurance \$1,700.

At Pella, Iowa, Sept. 9, fire destroyed the Washington Flour Mills, owned by Tysseling Bros. & Co. Loss \$21,000; insurance \$8,000.

At Mount Vernon, Ind., Sept. 9, the large elevator of the W. C. Fuhrer Milling Co. was burned. Loss \$100,000; partially insured.

THE Stephens City Steam Flouring Mill Company, capital \$15,000, has been chartered to build and operate a mill at Stephens City, Va.

W. L. FAIN, of Atlanta, Ga., has completed extensive improvements at his grain mills at Resacca, consisting of new elevator, warehouse, etc.

L. EMERY, JR., miller at Three Rivers, Mich., is reported to have given a chattel mortgage to the Three Rivers National Bank, for \$25,000.

At Griewood, Man., Sept. 10, the farmers' elevator, containing 25,000 bushels of new wheat was burned. The elevator was insured but the wheat was not.

KELLOGG & ROBERTS, proprietors of the Wyoming County Roller Mills at Lamont, N. Y., have dissolved partnership. Geo. P. Kellogg continues the business.

THE flouring mill at South Rockford, Monroe Co., Mich., belonging to John Strong & Son, which was destroyed by fire some time ago, will be rebuilt immediately.

MINNEAPOLIS parties are putting up a 100-barrel flour mill at Michigan City, N. D. The foundation is laid and the plant will be ready to operate about October 1.

At Norwich, Ont., Aug. 22, the Oxford roller flour mills and elevator, buildings and contents were burned. Loss \$40,000; insured for \$22,000. Walker, Harper & Co. were the proprietors.

THE Lincoln flour mill at Anoka, Minn., started Sept. 12, after a forced idleness of about two months, to run all winter. The mill is the property of the Pillsbury-Washburn Co.

A SAW-MILL, machine shop and flouring mill, owned jointly by Jno. & H. A. Webber and Henry Champion, located at Rockton, Ill., were burned Sept. 1. Loss about \$10,000; no insurance.

CHARLES VINCENT has purchased the old Seekonk Grist Mill at Great Barrington, Mass. The mill was built soon after the war of the revolution, and was owned by W. H. Perry of North Adams.

UNDER date of Sept. 1, Mr. D. R. Sparks of Alton, Ill., writes: "We are running only the large half of our mill, owing to the difficulty experienced in getting exchange; this point, however, is 'letting up'

somewhat now and we hope to do better in the near future."

PRICE, NASH & Co., of the Beaumont, Tex., roller grist mills, will erect a rice mill on their property adjacent to the grist mill, which will have a capacity of about 240 sacks per day. The machinery has all been ordered.

At Dubuque, Ia., Aug. 21, the elevator known as the Bently was burned. It had not been used for grain storage for several years. The original cost was \$11,000 and \$4,000 for machinery. The loss is partly covered by insurance.

At Humboldt, Tenn., August 9, the roller Flour Mills belonging to E. W. Ing & Sons, was demolished by the boiler exploding, and the mill took fire. The entire building and contents were burned. Loss \$12,000; with \$2,000 insurance.

At Milnor, N. D., Sept. 11, the Milnor roller mill was struck by lightning and burned. About 8,000 bushels of wheat was stored in the building, all of which was burned. The mill was owned by a stock company. Loss \$18,000, with little insurance.

THE White Star Milling Company, of Staunton, Va., has finished its six story building and the plant has been put in operation. The mill has a daily capacity of 500 barrels, and is one of the largest and best equipped plants in the State.

THE elevator at Diamond Bluff, Minn., owned by Matt Dill, and operated by one Johnson, was burned August 27. There was considerable wheat stored in the elevator at the time, and the loss will probably be \$3,500. The fire is supposed to be of incendiary origin.

THE Centurion is the largest craft of any kind now afloat on the great lakes, being 270 feet long and 45 feet beam. She was lately chartered for 155,000 bushels of corn, or 14,000 bushels more than has ever been carried on a lake steamer. She was built at Bay City, Mich.

G. E. DAVIDSON, Eugene Van Voorhis and W. H. Cook have leased the Prescott roller mill at Hastings, Minn., for a period of five years, possession to be given on the 15th inst. Mr. Davidson has also become a partner with Van Voorhis and Cook in the lower mill at Hastings.

At Windom, Tex., Sept. 13, fire destroyed four warehouses containing 8,000 bushels of corn, 115 tons of hay and two flat cars. The warehouses were the property of J. G. and J. H. Baldwin. Most of the grain belonged to the Empire Grain Company. Partly insured. Total loss, \$6,000.

At Duluth, Minn., Sept. 17, the steamer Cadorus, heavily laden with flour, came in collision with the Hadley and sunk. The damage to the cargo depends on whether the doors in the water-tight bulkheads were closed or not. The loss will probably be in the neighborhood of \$20,000.

THE Porter Milling Co., owning 27 elevators, and the Winona and Dakota Grain Co., owning 22, have consolidated. A. G. Moritz, secretary of the latter, is also secretary of the Winona Milling Co., which owns 49 elevators. The new company will be able to handle 2,000,000 bushels of grain per annum.

APPLICATION was made to Justice Bartlett, in the Supreme Court, Aug. 24, for an order dissolving the Kings County (N. Y.) Milling Company, and for the appointment of a receiver. The financial depression has nothing to do with the dissolution, as the company has now over \$15,000 in cash. Judge Bartlett took the papers.

THE Tileston flouring mill at St. Cloud, Minn., heretofore owned and operated by Geo. Tileston & Co., is in the hands of the Geo. Tileston Milling Co. The new corporation is capitalized at \$150,000, and its incorporators are Geo. Tileston, M. M. Walker, H. Lyons and J. B. Glover of Dubuque, Ia., Geo. W. Parker of Minneapolis, and J. H. Neer of New London, Minn. The mill has a capacity of 1,000 barrels daily.

THE Divine flouring mill property at Chattanooga, Tenn., has been leased by Mrs. Divine for a term of three years to the Mountain City Mill Co. The lessees took possession September 1, and expect to have the plant running to its full capacity by the first of October. The mill has not been in active operation for the past few months, but the Chattanooga Mill Co. has been using the property as a warehouse for their big stock of flour. By the possession of the property the Mountain City people now control the product of four flouring mills. One is at Sweetwater, one at Cleveland and two mills at Chattanooga. This makes the Mountain City Mill Co. the monarchs of flour in the State, and they expect to run every one of their mills to their full capacity.

THE FIRE LOSS of the United States and Canada for the month of August, as compiled from its daily records by the New York Journal of Commerce and Commercial Bulletin, amounts to \$13,222,700, a very serious increase, as will be perceived by the following figures.

CHAS. D. COX, Manager.

MAXIMUM LINES, - - - \$170,000.00.

C. W. MEEKER, Ass't Manager.

Western
The Mutual Fire Ins. Co., New York.
 TOTAL CASH ASSETS, \$1,511,192.21.
 NET CASH SURPLUS TO POLICY HOLDERS, \$861,376.55.
FIRE INSURANCE
 AT
MINIMUM RATES
 ON RISKS EQUIPPED WITH APPROVED SYSTEMS OF
AUTOMATIC SPRINKLERS.

48 Underwriters, collectively representing \$28,000,000.00.
 Underwriters all agree to abide by decision against any one underwriter.
The American Lloyds, New York.
 Department

TOTAL CASH ASSETS, \$235,692.13. NET CASH SURPLUS, \$214,308.63.

The New York Fire Insurance Company, New York.

SELECTED RISKS ONLY.

226 and 228 La Salle Street,

CHICAGO.

Milwaukee Bag Company MANUFACTURERS OF COTTON, MILWAUKEE, WIS.
 PAPER AND JUTE FLOUR SACKS.

The table shows the increase of fire loss during the first eight months of 1893, as compared with the same period in 1891 and 1892:

	1891.	1892.	1893.
January.....	\$11,230,000	\$12,561,300	\$17,838,400
February.....	9,226,500	11,914,000	9,919,900
March.....	12,540,750	10,618,000	16,662,350
April.....	11,319,000	11,559,800	14,689,900
May.....	16,660,393	9,485,000	10,427,100
June.....	8,587,523	9,265,550	16,344,950
July.....	9,692,200	11,530,000	12,118,700
August.....	9,055,100	10,145,300	13,222,700

Totals.....\$88,302,470 \$97,112,500 \$111,324,000

During July there were 246 fires of a greater destructiveness than \$10,000 each. The losses may be classified as follows:

\$10,000 to \$20,000.....	84
20,000 to 30,000.....	53
30,000 to 50,000.....	47
50,000 to 75,000.....	26
75,000 to 100,000.....	10
100,000 to 200,000.....	17
200,000 to 450,000.....	9

Total.....246

RECENT MILLING PATENTS.

The following list of patents for Milling and Grain-handling Appliances, granted during August 1893, is especially reported for the UNITED STATES MILLER by H. G. Underwood, Patent Attorney, 107 Wisconsin st., Milwaukee, Wis., who will send a copy of any patent named to any address for 25 cents.

- No. 502,883, Dust Collector, A. Gould, Canton, Ohio.
- No. 502,896, Middlings and flour separating machine, H. Bittinger, Regensburg, Germany.
- No. 502,764, Flour-sifting sieve, A. Schlee, Hagenow, Germany.
- No. 502,915, Wheat-scourer, J. D. Sheaffer, Avilla, Ind.
- No. 503,746, Grain-meter, W. Howard, Washington, D. C.
- No. 503,889, Grain-scouring and polishing machine, J. H. Williamson, Muncie, Ind.
- No. 503,719, Grain-measure register, B. F. Haley, Beatty, O.
- No. 505,173, Grain-scouring machine, Peter Provost, Menominee, Mich.

TRADE MARKS.

- No. 23,429, C. Dorr & Sons, Boston, Mass., Wheat flour, "TOWN TALK" used since 1875.
- No. 23,430, Thompson Milling Co., Lockport, N. Y., Wheat flour, "PRIDE OF NIAGARA" used since Nov. 1, 1890.

A VALUABLE WORK.

"The Science of Mechanics."

To any one desiring to become instructed in mechanical principles there has until now been only two courses available. He might take the regular mathematical disciplines preparatory thereto, and after a long course of study advance to the study of mechanics provided

with the supposed absolutely necessary mathematical equipment. This is no doubt the best course and until the appearance of Dr. Mach's work it has been the only course that would give one any ideas of mechanics that are really fit to be called knowledge. If he did not feel disposed to take so much pains on such a behalf his only recourse has been that repository of hazy, slazy, confusing, misleading, and utterly impotent dicta that goes under the name of Natural Philosophy.

Various causes have conspired to keep the gulf between these two orders of mechanical knowledge as wide as possible. The mathematicians naturally felt no interest in bridging it, since it gave them a practical monopoly of all the mechanical knowledge that was of any efficacy whatever. They made, besides, what seemed a valid protest that there was no royal road to a knowledge of mechanics. But while it is true that royal roads to any sort of valuable knowledge are out of the question, it is not true that one must needs have any great amount of mathematical knowledge in order to compass all the essential mechanical principles.

The best proof of this is the work now under notice: THE SCIENCE OF MECHANICS, by Dr. Ernst Mach. Translated from the second edition, by Thomas J. Mc Cormack. Chicago, 1893. The Open Court Publishing Co. Price \$2.50.

We are therein taken over the history of the search after, the discovery and the development of mechanical principles and are thereby, in a way singularly easy and efficacious, led into an insight of their nature.

At the same time there is no sacrifice of rigor and exactness. We venture the prediction that among those who will be glad to seek the enlightening lines of Dr. Mach, not the least appreciative will be many of those who have been wrestling with the aridities of mathematical symbols. In short, in Dr. Mach's work we have a first example of the solidities and precisions of exact science made plain to all who care to know them.

The first edition of this work was published in Germany ten years ago, as Vol. 59 of the "International Scientific Series." At that time its supposed lack of adaptation to popular comprehension led to its being dropped as one of the volumes of that "Series" as published in the English language. But, at least in Germany, it was found "popular" enough to cause the first edition to become exhausted in less than five years, and a second edition to be demanded, and now, by the favor of

The Open Court Publishing Company, readers in the English language have presented to them a translation that is in every respect honorable to American scholarship and to American enterprise.

The conspicuous merits of Dr. Mach's work are manifest on even a cursory inspection, but they become more and more prominent as one becomes better and better acquainted with his presentation of the very important topics of which he treats.

THE Review of Reviews for September is a number of fine variety and timeliness. It epitomizes and synchronizes the whole planet for the month of August, 1893. It discusses the monetary crisis, the silver debate, the tariff outlook, the Bering Sea decision, the French attack on Siam, the progress of the Home Rule bill, the politics of the European continent, various matters at Chicago and the World's Fair and a hundred other timely subjects, the whole number being profusely illustrated with portraits and pictures. A sketch of Engineer Ferris and his great wheel is a singularly readable and attractive article, and Mr. Stead contributes a most noteworthy character sketch of Lady Henry Somerset. There is an illustrated review of the fascinating story of Joan of Arc, the inspired Maid of Orleans, and a group of papers on the silver question by professors in the University of Chicago. The "Leading Articles of the Month" are notably well selected, while the "Record of Current Events" gives one a summary day by day of the remarkable course of the recent monetary crisis, and the cartoon reproductions in the "Current History in Caricature" are uncommonly entertaining.

BRITISH GRAIN TRADE.

The "Mark Lane Express" of Sept. 11 says in its weekly review of the British grain trade:

"There has been a better inquiry for new English wheat the last week and prices have been firmer. There has been an average rise of a shilling in both provincial and London markets. Foreign wheats have fluctuated, but the latest tendency is toward greater firmness. California wheat is in fair demand at 28 shillings offered. Russian and Indian wheats have advanced 3 pence per quarter in London and 2 pence per cental in Liverpool. Barley and oats are a shade dearer. The Russian government has de-

cided to buy 24,500,000 quarters of rye. This course was suggested partly by the present cheapness—17 shillings per quarter—at St. Petersburg, but the purchase is regarded also as a menace to the European peace in the coming year. Germany admits a deficit of 4,126,000 quarters of rye and an increase of German purchases of wheat in the English market is expected."

"To-day there was a good inquiry for English wheats, which were held for a shilling advance. Foreign wheats were held for six-pence advance. Corn was bought at 3 pence advance. Grinding barley was 6 pence dearer; oats, 3 pence dearer. Flour was held for 6 pence advance until about the close, when a good business was done at last week's prices. Rye and pulse were steady."

As the season progresses the varied character of this year's grain harvest becomes very pronounced, and it is no uncommon thing to have reports of good wheat crops almost side by side and in the same localities as those from which bad or indifferent yields are reported, says the *London Times* of the 11th inst. The secret seems to be—so far as careful inquiry can elucidate the matter—that on good lands and in spots where deep cultivation was adopted last autumn excellent crops have this year been gathered; but these have been far more than counterbalanced by bad and indifferent yields.

Florida and the Sunny South, via the Big Four Route.

To all persons contemplating a southern trip, the Big Four offers special attractions and advantages possessed by no other line. Solid vestibuled trains, heated with steam and equipped with palace sleeping cars, reclining chair cars and elegant parlor cafe dining cars run daily, making connection in Central Union Station, Cincinnati, with through express trains of the Queen & Crescent Route, Louisville & Nashville, Kentucky Central and Chesapeake & Ohio Railways, avoiding the tedious transfers necessary on other lines and affording practically through train service to Old Point Comfort, Asheville, Chattanooga, New Orleans, Savannah, Jacksonville, St. Augustine, Tampa, Indian River and all winter resorts of the South. Tourist tickets via the Popular Big Four Route at special low rates are on sale at all coupon ticket offices throughout the country. Ask the agent for ticket via the Big Four Route. D. B. MARTIN, General Passenger Agent, Cincinnati, Ohio.

THE WORLD'S WHEAT SUPPLY FOR 1893-1894.

Review of the Situation by an Expert.

(Written for the *Shipping and Commercial List*.)

THE recent advices from Austria furnish a good deal of timely and valuable information on the above subject. From Vienna the summary of the estimates of the annual Grain Fair, held there on August 28, shows the average condition of the wheat and other grain crops of the principal producing countries in Europe, also estimated extent of this season's wheat crop in Austria, Hungary, British India and the United States. Along with this report we have the estimates of the Hungarian Minister of Agriculture, showing in tabular form the production, surpluses and deficits of wheat in most of the wheat-producing countries of the world. According to these estimates, the world's production of wheat in 1893 has been 2,279,000,000 bushels, as compared with 2,280,000,000 bushels, the annual average for preceding ten years; the aggregate deficits of the importing countries is placed at 379,000,000 bushels and the aggregate surpluses at 378,000,000 bushels.

Following the receipt of these two reports, two rather singular conclusions have been deduced from them and pretty widely circulated—(1) that although the world's wheat production in 1893 is equal to the average of last ten years, it is, however, 206,000,000 bushels less than that of last year (1892); (2) that the wheat crop of Europe is 100,000 bushels less than in 1892.

As is to be expected in publishing cable messages containing quantities given in foreign measures, which sometimes express higher or lower weights, there are always some little difficulties in converting into American standards, and discrepancies will result. In the recent dispatches from Austria there are two or three unimportant differences as to the extent of wheat crop in Austria, Hungary, Italy and France, but the totals for these four countries correspond very closely. There is an evident error in the estimated surplus given for Bulgaria and Serbia in one of the returns as 465 metezenter (about 1700 bushels), but in the table compiled from report of the Hungarian Minister, the surplus of Bulgaria is given as 10,782,000 bushels, and for Serbia 3,406,000 bushels. There is a very important error in giving the World's Fair report for British India, by which it is made to say that the estimated yield for 1893 is 2,236,000 tons, as compared with 5,142,000 tons, in 1892. This is a palpable mistake, as the wheat crop of India in 1893 was

275,000,000 or over 60,000,000 bushels more than in 1892. All these discrepancies are easily adjusted, and do not create any difficulty in deciding as to the erroneous character of two unfounded conclusions as to deficiency of this year's wheat crop in Europe or the world, as compared with last year. According to the tables prepared from the estimates of the Hungarian Minister of Agriculture, the wheat crop of the countries in Europe amounts to 1,321,387,000 bushels in 1893. In the early part of last season, Dornbusch's estimate of the crop in Europe for 1892 was 1,152,400,000 bushels; Beerbohm's, 1,232,000,000; other authorities, 1,249,000,000; later changes in the estimates, in the way of increases or reductions, made the crop 1,283,000,000. (In Dornbusch's estimate the crop of Austria, 48,000,000 bushels, did not seem to have been included.) The book on "Production and Distribution," published by authority of the United States Secretary of Agriculture, shows average annual wheat production, in Europe during the ten years 1881 to 1890 as 1,265,000,000 bushels. Thus it appears that the estimate of the Hungarian Minister of Agriculture shows an increase in crop of 1893 over the ten years' average, also an increase, instead of the alleged deficiency, as compared with crop of 1892. As to the deficiency claimed between the world's wheat crop in 1893 as compared with 1892, this position is equally unfounded. According to the Hungarian Minister's estimation there is, outside of Europe, a deficiency in the United States crop of 120 million bushels, against which there is an increase in British India of 60 millions, in the Argentine Republic of 20 millions; other increases or decreases not important. The net deficiency outside of Europe is about equal to the net increase in Europe. It is difficult to understand how such conclusions as to deficiency, either in crop of Europe or of the world, can be deduced from the figures in the Vienna tables.

Another unaccountable statement is being widely circulated, to the effect that, according to an estimate published in the *London Times*, August 28, the United Kingdom will require to import during the crop year 1893-94, in wheat and flour, equal to 224,000,000 bushels (28,000,000 quarters). No doubt this will be found to be a misrepresentation of the statement of the *Times*, and that this estimate was as to the total consumption, and not imports required for the year. Taking the wheat crops of the United Kingdom for eight years, 1884 to 1891, as estimated by the

government, and adding thereto the net imports of wheat and flour, the average annual consumption is ascertained. By dividing the average consumption by the average population of these eight years, it is found that six bushels is almost exactly the per capita consumption, including food, seed, manufacturing and all other purposes. The immense imports of foreign wheat and flour during 1891-92 and 1892-93, when added to the medium crop of 1891 and very deficient crop of 1892, have led to the accumulation of vast reserves of native and foreign wheat. These reserves, including the excess over average of wheat and flour now afloat for United Kingdom, must amount to from 20 to 30 million bushels above the general average. Estimating the present population of Great Britain as 38,250,000, this makes consumption in 1893-94, at six bushels per capita, 229,500,000 bushels. To meet which, the excessive reserves September 1, 1893, were 20,000,000 bushels; wheat crop United Kingdom for 1893, 56,750,000, a total of 76,750,000 bushels; which makes requirements of foreign wheat and flour for 1893-94, 152,750,000 bushels; to leave average reserves on September 1, 1894 and large reserves on September 1, 1893, as 172,750,000 bushels.

The estimates based upon the figures of the Hungarian Minister of Agriculture are preliminary estimates only, and may be considerably varied by later reports when further progress has been made in threshing and delivering. So far as the United States crop is concerned, the estimates in the Hungarian table, both as to extent of crop and surplus for export, are likely to be largely exceeded. Commercial and State reports from California, Michigan, Indiana, Illinois, Iowa, Wisconsin and North Dakota all show a much better outturn for the wheat crop than was indicated by the national Government report of condition on August 1.

The statistical position is unpromising. If the world's wheat crop in 1892 was sufficient to meet all requirements during 1892-93, and leave very large reserves to be carried over into 1893-94; and if the world's wheat crop of 1893 shall prove to be as large as that of 1892, as appears to be the case, the deduction must be, that the reserves at end of the present crop year will have undergone another increase equal to that which has taken place in 1892-93. On the other hand, prices are unprecedentedly low, and it may be assumed that the consumption for human food will be increased, that a larger quantity of wheat will be fed to cattle, and that a considerable quantity of wheat

will be withheld from market. This last result appears to have already happened in British India, where, with a wheat crop in 1893 about 60,000,000 bushels larger than in 1892, the exports since April 1 have only been about one-half of those in the same time in 1892. It is said that the charges for transportation, &c., from the place of growth in some of the outlying districts in India to the markets in Great Britain are about equal to the value now offered for delivery there. The same may be said with respect to some of the distant provinces of Russia. The result of the wheat harvests to be gathered during our winter months in British India, Australia, Argentine Republic, Chili, upper Egypt, Syria, Asia Minor, etc., may have an important influence on prices later in the season. These countries produce about 20 per cent of the whole wheat crop of the world.

Admitting all that can be said as to chances of improvement in prices, that speculative sentiment at present prices may easily contribute to an advance, the supply is too abundant to justify any expectation of permanent improvement. Certainly the position affords no warrant for the issue of the dangerous Granger circulars in the West or for the rash advice of many newspapers, urging farmers to "hold their wheat." The experience of the past two years furnishes abundant evidence of the risk incurred by the adoption of such a policy. Not only was there a heavy loss sustained in the amount realized from the crops, but the withholding from export of about forty million dollars worth of wheat largely contributed towards the financial trouble from which the United States has suffered so severely.

ROBERT H. LAWDER.

NOTICE of the death of A. F. Roberts was posted on the New York Produce Exchange Sept. 19. It occurred on Sept. 18 as the result of consumption, from which he has been suffering for several years, and by which he has been kept from active business for a year past and from the Exchange for several months. Mr. Roberts was one of the oldest landmarks in the New York flour trade, having been associated with his brother under the title of L. Roberts & Co. till the failure of L. Roberts, since when the firm has been A. F. Roberts & Co. The house was one of the original South street flour and grain commission houses.

As harvest in England becomes more and more general and the rainy weather continues, the hope of the farmers securing a wheat crop, which up to the present shows one of exceptional quality, grows fainter and fainter.

Milwaukee Notes

THE Milwaukee Automatic Fire Service Company has been incorporated to manufacture and deal in all kinds of apparatus for the purpose of automatic fire alarm transmitters and fire service sprinklers. Capital \$50,000.

THE local money market is quiet and steady with a moderate supply of loanable funds which are divided among borrowers entitled to consideration on the part of their bankers. The rate of interest is steady at 7 per cent per annum. Bank clearings indicate a steady improvement in the business situation.

AWARDS have been made by the Board of Judges of the World's Fair in the Machinery Department for woodworking machinery to the Edw. P. Allis Co., for bandsaw machines, automatic log flippers, flooring and edge board machine and its adjustment of feed rollers, gang lumber trimmer, lathe bolter and lathe mill machinery.

JAMES W. DEGUENTHER, who purchased the whole of the capital stock of the Midland Maizea Milling Company on February 13, this year, for \$22,000, giving \$14,000 in cash and promissory notes for the balance, is sorry of his bargain and wants the contract set aside. He has brought suit in the superior court against the sellers, in which he alleges that they misrepresented the business of the company to him, and he asks that the contract be declared void and that the \$14,000 be returned.

WILLIAM W. BROMLEY, commercial agent of the Big Four route and Vincent Tuttle represented the exporting interests of Milwaukee at the inauguration of the Chesapeake & Ohio Steamship Company at Newport News, Va. The new company will handle a fleet of six boats that will ply between Newport News and Liverpool, London and Glasgow. There were about 200 representative railroad men and men representing the exporting interests of the country present at the inauguration. The Chesapeake & Ohio Steamship Company will give Milwaukee shippers a direct line through the interest of the Big Four and connections to the principal European ports.

ONE of our daily journals has been investigating the various ratios, adopted by city directory publishers, in estimating the population. In the first twenty-seven cities of the United States, as regards population, the ratio used varies from 1.70 to 4.50 per cent of population for every enumerated name in the City Directory for the year

1890. The ratio used by the Milwaukee compilers was 2.67 per cent. On the basis of 1890 computations adapted to latest published directories, Milwaukee steps into the thirteenth station, in point of population, among the great cities of the country, having risen three points in the three years since the last United States census, and she now steps in advance of New Orleans, Washington and Detroit, with a strong lead which promises to land her in advance of Pittsburgh long before the next census is taken. Milwaukee's percentage of growth has been higher, in the past three years, than that of any other city in the United States except Chicago, which has had the exceptional impetus the World's Fair has given it.

GRAIN FREIGHTS—Are quiet and steady on the basis of $1\frac{1}{2}$ c for wheat by lake to Buffalo. The demand for room is light, and confined to broken lots.

Flour—Is steady and in fair demand at \$3.80@3.90 for hard spring wheat patents, and \$4.00 is asked by some millers. Eastward freights have advanced except on one line.

Millstuffs—Are dull at \$13.00 @13.25 for sacked bran and \$14.00@14.25 for middlings, though some holders ask 25c more.

THE stock of wheat here Saturday the 19th inst. was reported at 946,071 bush, against 1,076,000 the corresponding day last year, 133,000 in 1891, 213,000 in 1890 and 402,000 in 1889.

The grain inspection into store in Milwaukee during the month of August was as follows: Wheat—100 cars No. 1 Northern, 32 cars and 68 loads No. 2 spring, 210 cars No. 3, and 39 cars No. 4; also 5 cars No. 2 winter, 57 cars and 1,485 bushel No. 3 and 3 cars No. 4; 109 cars No. 2 hard, 8 cars No. 2 mixed and 33 cars No. 3 mixed, 3 cars No. 2 red and 4 cars no grade. Corn—19 cars No. 2, 64 cars No. 3 and 4 cars No. 4. Oats—42 cars No. 2 white, 334 cars No. 3 white, 3 cars No. 2, 7 cars No. 3 and 8 cars No. 4. Barley—11 cars extra, 13 cars No. 3, and 7 cars No. 4. Rye—33 cars No. 1, 69 cars, 1,815 bushel and 2 loads No. 2 and 3 cars No. 3.

Inspected out in August—Rye—500 bushel No. 1. Wheat—201,000 bushel No. 2 hard winter. Oats—8,863 bushel No. 3 white.

ALL rail rates are quoted on the basis of 25c per 100 lbs. for flour and grain and $27\frac{1}{2}$ c for boxed provisions to New York. Lake transit rail rates are all on the basis of 23c per 100 lbs. on flour and feed to New York, and $25\frac{1}{2}$ c on provisions. Lake-and-rail rates have been fixed on the basis of 20c per 100 lbs. on flour, grain and feed to New York.

THE average daily production of flour by the city mills for the four weeks ending Sept. 16 was 6,556 barrels.

THE arrival of the 1893 catalogue of the Great Western Manufacturing Company of Leavenworth, Kansas, is just in time for us to publicly acknowledge its receipt. This is the thirty-seventh catalogue issued by this company since its establishment in 1858 and is in line with the general aim of the company regarding its productions—improvement, advancement. The 250 pages of the work are replete with descriptions, illustrations, prices, capacity, etc., of the various kinds of machinery manufactured by the company, yet they announce that "it cannot be expected that in a catalogue of this kind we can describe minutely all the various kinds of machinery which we manufacture. * * * It is our aim to keep fully abreast with the times in the latest improved methods of manufacturing, and to turn out machinery of the best class." Those interested should send for a copy of the 1893 catalogue.

THOUGH we have not, since its receipt, had time to read and thoroughly examine the contents of the Ninth Annual Report of the Agricultural Experiment Station of the University of Wisconsin, a hurried glance at the many and varied headings and the perusal of a few sections on some of the subjects embodied in the work assures us of its value. In its treatment of the subject, "The Smut of Wheat and Oats," the language and terms used are perfectly comprehensible to the ordinary reader; for, though the technical words are given, the common, every-day name for same is also given, which is a very thoughtful provision and we know the same will be appreciated by the general reader. The plates used to illustrate the work are well executed and very comprehensive. The reports and bulletins of the Station are printed by the State and will be sent, upon application to all residents of the State, who wish to receive them. All communications should be addressed to the Director, Prof. W. A. Henry, Agricultural Hall, Madison, Wis.

THE question involved in the suit for damages for the appropriation of a trade mark, an account of which appears elsewhere in this issue, can not be as to the right of defendant to the use of the word "Best" in connection with a brand of flour, because the word itself is but an adjective, denoting a quality, and words of that character, such as Fine, Superfine,

Extra, Best, Etc., according to court rulings, can not be appropriated as a trade mark by any one, to the exclusion of others. We presume the point at issue to be the right of plaintiff to the exclusive use of the particular style of letters and formation of the word and its connection with the balance of the brand as adopted. According to the account given, there does not seem to have been a very serious intention to misrepresent the article or to mislead purchasers in this case, as the name of the manufacturer and location of mill, both of which are entirely different from those of plaintiff, are made part of the whole brand; but it must be admitted that the use of a facsimile as to the word "Best", where there would be no trouble whatever in selecting a different style and form of the same word, has the appearance of a desire to imitate or infringe, for a purpose.

In the United States court at Minneapolis the Edw. P. Allis Co., of Milwaukee, brought suit against the Columbia Milling Co. of Minneapolis, on a balance of account of about \$3,000 claimed to be due for machinery put into the mill and the Columbia Company brought suit, in the same court, against the Allis Company for \$50,000 damages, claimed to be sustained on account of the failure of the machinery put in to do the work promised for it. A verdict has been given for the Columbia Company in the sum of \$21,966.70. Counsel for the Allis company took the statutory stay of forty-two days.

SICILY'S AGRICULTURAL PRODUCTS.

Sicily does not produce sufficient agricultural products for her own consumption, and is therefore, necessarily an importer. That her production has assumed proportions of any importance whatever is much more largely due to a rich soil and favorable climate than to the manner of cultivation.

Her wheat crop last year was below the average, and the condition of this year's crop is even worse. She imports annually large quantities of wheat from Egypt and the Black Sea countries, which amount will, this year, be augmented. Yet of the \$750,000 worth of wheat imported last year, none came from the United States. It would appear that, with little effort, a market for American wheat might be established, especially in view of the volume of fruit shipped to the United States and the number of steamships engaged in the trade that would gladly make a cheap freight rate so as to return with cargoes rather than in ballast, as many of them do.—Consular Reports.

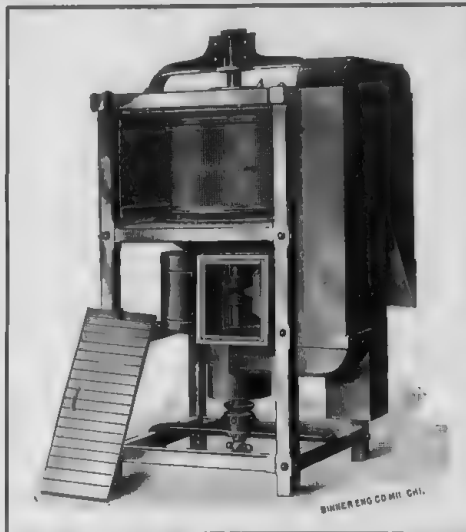
WHY? BECAUSE

IT IS WORTHY YOUR CONSIDERATION IF YOU ARE PROGRESSIVE AND WILL HAVE
THE BEST IN THE MARKET.

IT IS THE MOST
Perfectly Ventilated.

It will DISCHARGE all DIRT and SCREENINGS. You will not be obliged to put in a rolling screen or other device, to take out the

DUST AND DIRT.



IT WILL NOT
Break any Wheat.

It is built of the best steel, iron and wood that can be procured, and in the strongest manner possible. All parts can be easily and

CHEAPLY RENEWED.

IT WILL SCOUR SMUTTY WHEAT PERFECTLY.

WE GUARANTEE THIS MACHINE IN EVERY RESPECT.

PROVOST MANUFACTURING COMPANY
MENOMINEE, MICH.

WANTED.

Some Live, Practical Mill men, to introduce our New Method of
LEVELING ROLLS WHILE RUNNING.

ADDRESS, AMERICAN ROLLER LEVELING CO.,
MILWAUKEE, WIS.

AMERICA'S MOST UNIQUE AND ATTRACTIVE ILLUSTRATED MONTHLY. **HOME AND COUNTRY MAGAZINE**

Published at 53 E. 10th St., N. Y. City.

FOR EVERY MEMBER OF EVERY FAMILY.

25 CENTS A COPY.

BY THE YEAR, \$2.50.

Entertaining, Instructive, Profusely and Artistically Illustrated.

Wide in Its Scope,

Liberal in Its Views,

Pure in Its Morals,

Advanced in Its Teachings,

Religious in Its Sentiments.

**HELPMATE TO MAN,
 COMPANION FOR WOMAN,
 WELCOME FRIEND TO ALL.**

Americanism is infused into its columns.
 Science is popularly treated.
 Dress, Fashion and Domestic Economy by popular contributors.
 Business Articles in its columns valuable to all who work for a livelihood.
 Fiction: Its stories, profusely illustrated, by the best authors, are complete in each number.
 Poetry: Travel: Adventure.



From "Dress and Its Science."

Amongst the Well-known Authors who Contribute to "Home and Country Magazine" are:
 CHAS. F. DEIMS D.D. LL.D.
 MRS. HENRY WARD BEECHER,
 HEZEKIAH BURLEIGH WORTH,
 ELIZABETH WILCOX,
 PROF. JOHN CLARK RIDPATH,
 CHARLOTTE W. HAWES,
 T. V. POWDERLY,
 ELIZABETH CARDOZA,
 JOEL BENTON,
 COM. and MRS. BALLINGTON BOOTH,
 GEN. JOSEPH A. NUNEZ,
 And a Host of Others.
Desirable Agents Wanted in Every Locality.

IF YOU WANT INFORMATION ABOUT

PENSIONS

ADDRESS A LETTER OR POSTAL CARD TO

THE PRESS CLAIMS COMPANY,

JOHN WEDDERBURN, Managing Attorney,

P. O. Box 463.

Washington, D. C.

Honorably discharged soldiers and sailors who served ninety days, or over, in the late war, are entitled, if now partially or wholly disabled for ordinary manual labor, whether disability was caused by service or not, and regardless of their pecuniary circumstances.
WIDOWS of such soldiers and sailors are entitled (if not remarried) whether soldier's death was due to army service or not, if now dependent upon their own labor for support. Widows not dependent upon their own labor are entitled if the soldier's death was due to service.
CHILDREN are entitled (if under sixteen years) in almost all cases where there was no widow, or she has since died or remarried.
PARENTS are entitled if soldier left neither widow nor child, provided soldier died in service, or from effects of service, and they are now dependent upon their own labor for support. It makes no difference whether soldier served or died in late war or in regular army or

Soldiers of the late war, pensioned under one law, may apply for higher rates under other laws, without losing any rights.

Thousands of soldiers drawing from \$2 to \$10 per month under the old law are entitled to higher rates under new law, not only on account of disabilities for which now pensioned, but also for others, whether due to service or not.

Soldiers and sailors disabled in line of duty in regular army or navy since the war are also entitled, whether discharged for disability or not.

Survivors, and their widows, of the Black Hawk, Creek, Cherokee and Seminole or Florida Indian Wars of 1832 to 1842, are entitled under a recent act.

Mexican War soldiers and their widows also entitled, if sixty-two years of age or disabled or dependent.

Old claims completed and settlement obtained, whether pension has been granted under later laws or not.

Rejected claims reopened and settlement secured, if rejection improper or illegal.

Certificates of service and discharge obtained for soldiers and sailors of the late war who have lost their original papers.

Send for laws and information. No charge for advice. No fee unless successful. Address,

THE PRESS CLAIMS COMPANY,

JOHN WEDDERBURN, Managing Attorney,

P. O. Box 463.

WASHINGTON, D. C.



DUST! DUST!

GIBBS' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust; invaluable in Mills, Elevators and every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel-plated protectors \$1, postage 5c. Circulars free. Agents wanted.

GIBBS RESPIRATOR CO.
 20-26 La Salle St., Chicago.



Don't forget to mention this paper when you write.



S. H. SEAMANS, PUBLISHER.

PUBLISHED MONTHLY.

OFFICE:

68-C MITCHELL BUILDING, MILWAUKEE.

Subscription Price—Per Year, in Advance:

To American subscribers, postage

prepaid.....\$1.00

To Canadian subscribers, postage

prepaid.....1.00

Foreign subscriptions.....1.00

All Drafts and Post-Office Money Orders

must be made payable to THE UNITED

STATES MILLER.

Bills for advertising will be sent monthly

unless otherwise agreed upon.

For estimates for advertising, address

the UNITED STATES MILLER.

[Entered at the Post-Office at Milwaukee,

Wis., as a mail matter of the second class.]

MILWAUKEE, SEPTEMBER, 1893.

We respectfully request our readers

when they write to persons or firms

advertising in this paper, to mention

that their advertisement was seen in the

UNITED STATES MILLER. You will

thereby oblige not only this paper, but

the advertisers.

Editorial.

WHILE the financial blizzard which has been raging for the past four months, carried destruction to nearly all classes of manufacturing industries, throughout the country, both east and west, it is pleasing to contemplate the fact that very few if any of our milling firms have been "forced to the wall" or even thrown into suspension, by the numerous bank wrecks that have occurred. One would suppose that mill owners would have suffered with the others in the general collapse.

Bread-stuffs had reached the lowest prices possible and the shrinkage, which had been going on for eighteen months or more, had gotten to a point where further depreciation was all but impossible, consequently the milling industry was saved from the furious storm which overtook other lines of trade and which had not reached their lowest level. Now that times begin to brighten and trade becomes more brisk, the miller finds that he starts at the bottom of the market, in purchasing the raw material and the trade, having become impressed with the fact that the panic did not further reduce prices, are now more willing buyers, and it is natural to expect that with the present bullish prospect for wheat, millers will have a prosperous year from this time out.

Some good signs have already appeared on the surface

which, if not done away with by the overanxiety of millers to sell, regardless of consequences, will result in obliterating one, if not two very undesirable conditions which have gradually crept into the trade, within the last few years. We refer first, to the abominable practice of selling flour to be ordered out at the option of the buyer. In many cases this option is unlimited as to time and, in some running six months or more. The inability to finance these sales has forced millers to limit the time for ordering out, to thirty days at the outside; the second practice referred to is selling on thirty and in many cases, sixty days time. This practice, too, has been curtailed, for the same reason as the first one.

It has always been a mystery to us, why millers, with the usual narrow margin on flour, should not sell their products for cash only or, if time must be given, why should there not be a regular charge per month for carrying flour, similar to the charges of elevators for wheat.

A case in point has been brought to our notice; a prominent milling firm—located not a thousand miles from the great milling centre—sold a New England buyer 1,000 barrels of flour, we will say at four dollars and fifty cents per barrel, delivered at New England; four months later, this purchased flour had not been ordered out; the miller ground the flour ready for delivery in May, yet in September it was uncalled for. The represented money, put into carrying wheat, would have netted the miller at the rate of over thirty cents per barrel—it cost fully six cents per barrel, as interest, to carry it—making a total loss, to the miller, of thirty-six cents per barrel and his original profit did not exceed probably, fifteen cents per barrel, on the flour sold; and the buyer is a lost customer to this firm; he will bide his time and, when the market reaches the purchase price, will immediately demand the delivery of his purchase and should the miller propose to charge reasonable interest or "carrying charges," he would be accused of "Wanting the earth".

We are loth to believe any other branch of trade would

submit to these methods, without strong protest.

THE time is drawing near when the several suits entered by J. H. Russell against Wisconsin millers, who have paid high for the privilege of purchasing and using mid-dlings purifiers, manufactured under the Geo. T. Smith patents, must come to trial.

In the suit against J. O. Kendall & Co., of Hartford, demurrer was filed, on the grounds that Russell, being simply a licensee and having no legal title to the patents, could not maintain the action indicated in his bill of complaint. This demurrer, though seemingly sound law, was overruled by Judge Jenkins, to the surprise of nearly every one. Answer to the bill was thereupon promptly filed, but it has never been called up for argument. In the subsequent suit, against J. B. A. Kern & Son, demurrer was filed, upon the same ground, and citations made, which it was believed must result in sustaining the plea. Judge Seaman, before whom the suit was heard, however, followed directly in the footsteps of his predecessor. Answer to this bill of complaint will be filed October 1st. All other points of defense against Russell's claims failing, there remains the old question to fall back upon, as to the validity of the Smith patents, which has never reached final decision in the courts. Those who are well posted relative to the old litigation upon these patents have little fear but that the defendants will ultimately succeed in their fight for justice, but it will take much time and involve great expense to bring about the desired result. It is an outrage that tedious and expensive litigation of such a nature should be possible.

"I WILL NOW" said the variety star of the *North-western Miller*, "give you another of my realistic imitations of a jackass trying to kick the light out of the moon, because it happens to shine on his oats," and forthwith he proceeded again to make a silly spectacle of himself, by letting fly with his heels into empty space and braying loudly over some statistics which everyone has seen, four months ago,

when correct reports were printed of the Millers' National Convention, and which his agile imagination has enabled him to distort and re-distort until he seemingly does not know what the figures actually were. On July 21st he claims that the report of the Treasurer of the Millers' National Association shows that the *total receipts for membership fees*, for the year ending June 1, 1893, amounted to but \$175, which he asks to have compared with an average receipt of \$3,120 per annum claimed by him, during the period when he thought he ran the machine. Now, evidently neglecting to consider what tales he has heretofore told, or review the minutes of the past, (as all good prevaricators are wont to do) he asserts that the Treasurer's report, aforesaid, showed that he had received for initiation fees \$175 and for dues \$3,012, *paid on the basis of but \$3.00 per unit of capacity instead of \$5.00*, as in King Willie's time, making a total of \$3,187 for the year, equivalent to \$5,195 on the old \$5.00 basis, which does not sustain his former boastful comparison to advantage.

If anybody read or noticed this sort of stuff, which so delights the youthful editor and which he so persistently imposes upon the otherwise fair pages of his publication, it might pay to show up his inconsistencies and eccentricities in handling facts. Even the blackguardisms and choice epithets of "liar," etc., etc., with which he interlards his "editorial" effusions, have lost their savor for the few who like that sort of thing and have looked upon it as "spice" in literature.

WE acknowledge the receipt of a copy of "Souvenir World's Columbian Exposition, 1893", which is the title of a handsome pamphlet issued by the Dodge Manufacturing Co. Engineers, Founders and Machinists, Mishawaka, Ind. It is replete with interesting and valuable information relating to their manufactures and other matters in connection with power transmission and the half tone illustrations are of a superior class. The souvenir is for gratuitous distribution and will be mailed to applicants.

Correspondence.

[The following letters are all from our own special correspondents, and reflect their views and the views of the trade in the location from which they write.]

NEW YORK.

Export Demand Falling Off. European Markets Glutted. But Home Trade reviving with Return of Confidence. Easier Money. Repeal of Silver Legislation and Belief in Higher Prices later on. Flour already Advancing.

THE almost unprecedented export demand for our wheat, for the past three months, or since the collapse of the corner in Chicago, has been followed by a natural slackening in demand, the last month, because Europe has become congested by the continuous and heavy arrivals of this immense volume of supplies, taken on a declining market, to "average down" on previous purchases, and because it was abnormally cheap, and also, because Europe had a heavy shortage to make up before another crop. The same has been true of flour, to which has been added the burden of heavy consignments from our mills direct, during our money stringency, when funds could be more easily and cheaply obtained on the other side to carry the accumulated stocks in millers' hands, that could not be sold here during the panic. The result is that Europe has anticipated her shortage for the first half of the crop year, to a great extent, and cannot take more, freely, until her storage capacity is relieved and the pressure of spot arrivals reduced. This applies both to wheat and flour; and, so good an authority as Mr. Henry Koper, of Grinnell, Minturn & Co., who have been by far the largest exporters of flour from this market, on this crop, tells me, after a three months' visit to the United Kingdom and Continent, that both are so glutted by their stocks and continued arrivals on old forward purchases, that neither will be able to resume purchases, on a large scale in our market, this side the new year.

Besides, there has been, and still is, a loss in nearly all this enormous volume of imports; and, the other side is waiting for our money panic to subside and a bull reaction here, to lift European markets where they can get out without loss or with a profit. But, this very condition of affairs abroad, is preventing a further advance here than that caused by the reaction from the acute stringency in the money market, following the prompt and decisive repeal of the wretched silver legislation of the past four years, by an overwhelming majority in the lower branch of congress. Those who bought wheat in anticipation of that action, or on the unexpected majority in its favor, have since been selling out, on every thing spot, be-

cause they fail to see where the necessary support for a further advance is to come from during the next two or three months, while Europe is digesting the enormous meal she has eaten. This, and the increasing interior receipts of winter wheat, since the currency famine and domestic exchange embargo have been relieved, simultaneously with the beginning of the spring wheat movement, have caused the downward tendency of our wheat markets the last week or ten days, notwithstanding the Bears became alarmed by the appearance of "outside" buying, after the action of the House on the Repeal Bill, and covered their shorts. Since then, this "outside" or sentimental demand has ceased; and, without the usual "short" support, there has been nobody to take the daily realizing sales of those who bought a couple of weeks ago for the Silver Repeal Boom and the natural reaction that had been expected whenever the panic should subside. The market for wheat has, therefore, been drifting into a dead net, from which there is neither enough speculation nor export demand to lift it, yet just enough to prevent anybody selling enough to break prices sharply. The opinion is consequently gaining that we will have this sort of a market until the last half of the crop year makes the crop shortage felt, as there is little news now that can affect prices, since the world's crops are secured and estimated closely enough to remove the fear of anything like famine prices on the last half of the crop. Hence there is little disposition to "bull" prices now, for what may happen six or nine months to come; for, the trade and financial outlook, here and abroad, is not sufficiently hopeful to encourage "bull" speculation, even if there were enough speculators who have escaped the losses of the late panic, to make a "bull" campaign possible, for the present.

This is the situation in wheat, and also in flour for export. But there is a better feeling in the home trade for the latter, that has been slowly but steadily developing the last ten days and has resulted in more free buying the last week than has been experienced since sometime before the panic. As noted in former letters, this trade had become so discouraged in the last two years, buying on an almost constantly declining market, that "bargains" could no longer tempt them to purchase or contract ahead of their immediate wants, no matter how tempting they might seem. The consequence was that stocks in second hands were seldom if ever so light as during the panic. When it began to subside, therefore, nearly everybody in

the trade had to buy a little, and when they began to look around for supplies, they found stocks moderate or small, and millers indisposed to sell at any further concessions on stuff already here, while they refused spot prices for stuff to arrive. This condition of things had been brought about by curtailed production during the panic; sales, or consignments to Europe of a larger proportion of the production of mills running, than usual, and higher prices at other eastern and southern trade centers, than had been ruling here.

For the first time in a year, except for low grades, the buyers found they had to do "the walking" to find what they wanted; and, the competition was strong enough to enable sellers to dictate terms instead of the buyers. This new sort of experience soon created the feeling that flour had at last struck bottom, whether wheat had or not, and confidence in the immediate, as well as remote future of the market began to displace the despondency that had characterized buyers for months, resulting in the best and most general demand for all trade brands, during the past week, that has been seen in months. It was not so active, however, as it has been in that line, for the reason that there were no big blocks sold to a few large jobbers, as used to be the case; but everybody was in the market for car lots up to 1,000 and occasionally 2,000 and 3,000 bbl. lines, of all kinds of spring and winter medium and high grades.

It began in winter straights and choice clear do., extended to spring bakers, then to spring patents and finally to winter patents, which were neglected until after the former named grades had been advanced 10c. at least, although they had been ruling for months below their relative value to other grades, without attracting demand, namely, \$3.70 @ \$3.75, while straight winters were selling at \$3.10 @ \$3.25 and spring patents at \$3.90 @ \$4.10 for the standard to fancy brands of Minneapolis and Duluth, excepting Pillsbury's, which was not quoted below \$4.30, although it was unsalable until recently at that price, at which about 20,000 bbls. were taken before the advance to \$4.45, the middle of last week.

In this connection there has been a deal of gossip in the trade, about the second rupture between Pillsbury and Sweezy, who has handled more of his patent in this city for years than any other jobber. It arose, as did the first break, about six months ago, over the large amount of "Perfect"—the Consolidated Company's crack patent—that Sweezy had been handling together with Pillsbury's, although his sales of the

latter had been about the same as before, or about 150,000 bbls. per annum. Mr. Pillsbury came down on the previous occasion, and he and Mr. Sweezy dined together and the "unpleasantness" was fixed up. The last "row in the family" occurred on the failure of Sweezy to maintain the uniform price of \$4.60 with 30c. per bbl. rebate to all jobbers who did not cut that price. Mr. Smith, the sole agent for Pillsbury's Best in this city, suddenly announced to the trade, about three weeks ago, that he had refused to sell Mr. Sweezy any more of that flour, and alleged as a reason, that the latter had violated his agreement to maintain the price fixed by the mill. Mr. Sweezy's friends admit that he cut the price, as he had always been able to do, by reason of the larger amounts of the brand he bought than any one else and, without objection from Pillsbury, until after the first break. But they also claim that Mr. Sweezy never signed the agreement to maintain the mill price, as that would prevent his making his own price to his customers as he had always done. So the fight goes on, in silence on both sides, since the first explanations given above were made, with the Consolidated Company and its New York agent, Mr. Perrin, the chief beneficiaries.

Our city mills have been able to keep their patents sold up to or ahead of production through the stagnation, as their blended flours have made big inroads on the city and New England family trade in place of both spring and winter patents, during the past year, for reasons before explained, that blended flours are equally good for bread and pastry, whereas neither of the former are, while the percentage of patents made by our city mills is much smaller than either of the others (about 40 per cent), and hence the quality Superior, as shown by the price the grocers, who formerly used the western flours exclusively, are paying for the city, namely, \$4.25 @ \$4.50, as to brands and sized lots. But then, West India grades have dragged, as they have done since the price of western clears went to \$3.00 for standard and straight do. to \$3.25, while city clears have been held right through the depression at \$3.75 @ \$3.80, or the top price of winter patents. On the other hand, the drought in this country and in Europe and short pasturage and feed crops has given these city mills a monopoly of our market and some eastern cities, and of export trade in bran, which has been a regular bonanza to them at 80 @ 82½c. at which they keep sold ahead, on an average, a month, right along. This price is, delivered at their mills.

In low grades of flours there

has been an enhancement of values for spring for feed purposes below \$1.90. But they have been almost nominal, having been contracted ahead for export. Low grades of winter have not advanced with trade brands, as they were relatively too high before, on the late reduced production, and with an increase now, they are easier, especially superfine winter at \$2.00@2.10 in sacks; \$2.20@2.30 in bbls.

Rye flour has been held up, until the latter part of the month, by scarcity on account of the drought in this state and low water for running mills. But the latter half of the month has been blessed with rains and the supply has caused an easier market at \$2.90@3.25 for superfine.

NEW YORK, Sept. 9, 1893.

BUFFALO.

THE demand for flour during the past three weeks has been enormous in the face of existing conditions of the banks. Spring patents which were sold on the first of this month at \$3.90@4.00 advanced to \$4.20@4.25 during the first week and sold up to \$4.30@4.35 by the 10th. Winter straights were also higher, sales being made at \$3.35@3.40.

With an easier money market the John T. Noye Manufacturing Company will again assume control of their immense business. Work has been slack there for some weeks, but will be resumed this month.

The big wheel pit, of the Niagara Falls company is 200 feet deep, 20 feet wide and 100 feet long, and will contain four wheels of 5,000 horse power each.

The Coatsworth elevator was destroyed by fire. Of all the hard luck this big storehouse has had more than its share. Built on the "cheap John" plan, it was one of the principal causes of the death of its builder. It first settled toward the slip on the east and then tried to topple over into the river on the north. After being repaired, the sides bulged out and at no time would the machinery or scales work to satisfaction. Finally it went up in smoke much to the relief of everybody who ever had a pound of grain in it.

The Fulton elevator destroyed by fire at the same time the Coatsworth went up in flames was an eyesore and a danger. It had not been used in 25 years but still had a share in the elevating association's profits. Several cables were required to keep the tower from falling into the creek and people who live on the island would not go within hailing distance of it. There are two more just about as old and useless as this one

and all taking profits from the association.

There was a fight in one of the Buffalo markets between Jews and Poles some days ago, and the Buffalo papers came out as usual with big "scare" heads announcing a "BREAD RIOT." Of course the bread riot was all imagination, as these people are far from starvation, but it caused considerable excitement and when Mr. W. C. Newman, the great Akron miller, finished reading the account of the trouble he exclaimed: "Great Scott! a bread riot? and I am selling flour at \$2.25 per barrel, and the sack makes one pair of pants and a night gown!! Impossible! Why, there isn't a back yard in East Buffalo not bleaching and advertising my "stone mill" brand of flour."

Money is as free as water in Buffalo at present and likely to be so until late in the season when the usual scramble for funds to carry wheat through the winter will begin. Buffalo bankers have been unusually generous to grain men throughout the late trying ordeal—that is some of them, especially the marine and the German-American. These two banks will in a short time handle all the grain business.

The state wheat crop has been heavy, but farmers are not marketing their crop at present prices. Oats are a failure.

The canal traffic this season has been something prodigious compared with last year. The total shipments to date were 29,500,000 bushels as compared with 15,200,000 last year and 16,900,000 in 1891. This has all been done at a paying rate, averaging 4½ cents per bushel against 3½ last year. Truly the old ditch is making up for lost time, but wait until next year when the roads are not so busy with other traffic and these figures will look sick. The rail up to date carried 45,000,000 bushels, against 48,500,000 last year and 36,000,000 in 1891.

The receipts of flour for the season thus far were 4,900,000 barrels, against 5,300,000 last year and 3,100,000 in 1891. There is an unexpected falling off this season, but this may be made good this month, as the receipts are coming in heavy.

Canal forwarders have made no money. The old timespeculator in freights has been caught and floored. As a rule he would have been better off taking the grain from shippers and exacting a commission for his labor. But a gambler is not contented until he has dropped his all.

F. Werdelman has purchased a site on Seneca street, at the Buffalo creek, on which he will erect a flouring mill. The cost will be \$25,000 and work to be completed early in the spring.

Huntley, Cranson & Hammond of Silver Creek, manufacturers of grain-cleaning machinery are not as busy as usual at this time of the year and have reduced their force of workmen one half.

The Attica mill is again before the public. This is the most unfortunate piece of property of its kind in the state. Complete in every respect, with all the necessary machinery, this mill has not been able to keep running for more than two months under one management. It's a "looser" if there ever was one. A. K. Hume, who traded a lot of land for it and attempted to run it on "a new principle," has succumbed, and the mill will grind no more until another "sucker" is found.

Good paying mills are scarce. As Mr. George Urban would remark: "It takes money to buy honey."

Wheat is low—dreadfully low—in Buffalo. It was 20c per bushel higher last year on the first day of August than it was this. I believe No. 1 Northern Duluth at 65½ spot is worth buying for a 20c advance. The talk of heavy receipts is all bosh, as farmers know they can loose nothing by holding on at these prices and will do so as soon as they have marketed enough to pay off small debts. Mr. Harris Fosbinder has been reelected one of the trustees of the Merchants' Exchange Gratuity Fund for a three year term. This is considered quite an honor and especially so as his opponent was the popular ex-president of the Exchange, General Graves.

Samples of the new wheat from the Northwest are just beautiful as compared with last year's fairly good quality. The difference in price between the old and new No. 1 Northern is only ¼c, whereas last year 2@3 cents was asked at the opening. Sales in this market from the 1st of September to the 10th averaged 100,000 bushels per day of c. i. f. Duluth wheat, which all went to millers at from 64½ to 67½. Trade will be active from now on until the closing of navigation and it is predicted more wheat will be carried in Buffalo this winter than ever before.

The John T. Noye Manufacturing Company is furnishing a complete steam plant for Chase, Armstrong & Shaw, of Rochester. No dependance can be placed upon water and the company mean to be on the safe side even if the Genesee does furnish a fair supply of power nine months in the year.

Mr. A. P. Wright has been appointed manager of the Great Eastern Elevator Company. This new storehouse will be finished next spring and with an old grain man at its head,

much is expected. Mr. Wright will find that times have changed wonderfully since he was in the grain business.

Barley is very backward. Last year, at this time, the movement was heavy, but so far there is no signs of anything doing. First reports favored the maltster; there was plenty of barley and it was going to be awfully cheap. To-day, not a pound, practically, is offered at any price. The question is, what has become of it? Our buyers have picked up from 100,000 to 200,000 bushels each, in the west, at very low prices, but could find no more.

Millfeed has been active and strong and the prospects are for higher prices in the next 30 days. Coarse winter bran has been selling easily at \$16.25 sacked, and the supply light; spring \$15.25 and choice white middlings \$17.50. Low grade flour, of which quite a liberal amount has been in market, sold at \$16.75@17.00 per ton. Rye feed \$16.00 per ton and demand good.

Rye flour seems to hold its own at \$3.00, although the price of that cereal has not been so low in 15 years, sales having been made, within a week, of No. 2 at 46c. Rye is cheap at these prices and there is not a speculative article on the board which would pay better if held until January.

Major J. G. Heinold went to Chicago to see the Fair, but did not "enthuse" as much as other members of the Exchange. They could not get enough of it—he did.

There is talk of a big mill on the banks of Buffalo river or within easy reach of it. Property on the Ohio basin has been figured for and as it offers good shipping as well as receiving facilities it will probably be taken.

Mr. S. S. Guthrie is still confined to his room. His son Harry is attending to the business of the firm.

Mr. O. G. Spann, of Spann & Chandler, the largest barley dealers in this market, is west on a business trip.

Mr. George H. Wolcott returned last week from Chicago.

BUFFALO, Sept. 11, 1893.

DULUTH.

IT requires no prophet to tell us that business will revive. It has revived, and while yet not so lively as it might be or will be, it is, nevertheless, so pronounced that every artery and fibre of trade is pulsating with the renewed energy, and business men all along the line have taken fresh courage. Out here, at this intermediate depot—this clearing house between the Northwest and the East—wheels that have been idle are beginning to turn and the interchange between the two

great sections has been resumed. A syndicate, capitalized at \$30,000,000 has just been organized with such men as J. D. Rockefeller, Wetmore, McDougall, the Merritts, etc., behind it, to take charge of the iron business of the limitless mines hereabout, and has commenced active operations. The idle saw mills have turned on steam and every mill at the head of the lakes is now in commission and the yellow boards are accumulating in great quantities about the docks. The splendidly equipped new flouring mills are just on the eve of starting—are putting finishing touches to machinery and appliances, while the older mills are constantly increasing their output. The great problem of moving the new wheat crop has been solved and the crop is moving. Millers are booking orders, and the commerce of the lakes, generally, has taken on a more healthful tone—these are some of the signs which indicate the trend of business, and they are so broad that the wayfarer who runs may read them.

The panicky feeling is steadily subsiding among the business houses here and money is coming out of its hiding place. If there was a certainty about the tariff the financial depression would soon pass into history. Industrial affairs in this part of the Northwest are largely affected by the iron business, and this great interest demands, first, that the tariff be let alone, or, second, if it is to be tinkered with, that such tinkering be immediate and decisive. While this question does not so directly interest the millers, the iron business is so extensive and such an important factor in commerce, generally, that every concern at the head of the lakes is more or less affected by what affects it.

The flouring industry has been among the first controlling businesses to respond to the demand for an increase of activity. The first week in this month the mills at the head of the lakes scored their biggest run since early last June. The output for that week was 44,083 bbls., a daily average of 7,347; the week previous the grist was 36,167 bbls. The Lake Superior, Freeman, Imperial and Duluth Roller Mills were in operation. Last week the output was still greater, the record being as follows: Produced 48,317 bbls.; shipped 46,024 bbls.; in store 17,022 bbls. There were received 179,001 bbls. by rail from the west, of which 104,369 bbls. were shipped, leaving in store, of the railroad flour, 209,273 bbls. The output will be steadily increased by the old mills, and as soon as the new mills begin operation the increase will be greatly augmented.

The flour market is fair and the outlook encouraging; orders are booked sufficient to keep the mills in operation for some time. The demand for feed is also strong, the mills quoting bran at \$13.00 and \$14.00 for red dog in 200 lb. sacks. Rates down the lakes have been an inducement to free shipment.

The crop year closed with the day's business, August 31, and the period was replete with interesting figures and milling and shipping data. The year, upon the whole, was a satisfactory one, yet the national depression in the latter months was seriously felt. The volume of wheat handled was greater than that for any previous crop year, except for 1891-1892. The increase of the flour output from the mills included in secretary Welles' report, of the board of trade, was over 80 per cent; this increase was due largely to the new mills in Superior, the output from which, for the first time is noted in a crop year report. These mills on the South side of the bay during the year turned out 677,816 bbls., while the Duluth mills have a record of 929,800. The total grist for 1891-1892 was by the Duluth mills alone and amounted to 889,182 bbls. For the current year Superior will distance the Zenith City as all her mammoth mills will soon be in commission.

The output of the Duluth and Superior mills for the crop year just closed as compared with the output for 1891-2 for the same period was as follows:

	1891-2	1892-3	1893-4
Duluth, bbls.	80,374	26,084	96,083
Superior, bbls.	16,660	39,345	66,387
September.	12,913	18,540	56,091
October.	21,004	29,917	50,307
November.	32,155	10,326	42,028
December.	48,193	16,751	77,230
January.	83,171	50,013	94,500
February.	31,503	91,438	63,962
March.	75,819	74,800	76,143
April.	56,163	91,001	87,256
May.	39,049	109,101	87,955
June.	66,807	128,080	94,855
July.			
August.			
Totals	929,800	677,816	889,182

The receipts of flour, for the year ending Aug. 31., as shown by the report are largely increased over the year previous, the number of barrels in excess being 827,290. The flour shipments amounted to 5,459,174 bbls. or 1,371,531 bbls. more than for 1891-92.

The figures in detail, showing the production, receipts and shipments of flour are as follows.

	Output, bbls.	Receipts, bbls.	Shipments, bbls.
1890-1.	5,813,357	2,323,222	2,839,119
1891-2.	889,182	3,391,954	4,087,643
1892-3.	1,007,816	4,219,244	5,159,171

There was a slight decrease of the receipts of wheat during the past year, the total number of bushels being 39,737,935, while the shipments were 34,377,292. Of the receipts, the Duluth elevators stored 24,743,390 bushels, and the elevators of Superior 15,000,538 bushels. The receipts and shipments of grain for the crop year as com-

pared with the receipts and shipments for the year previous, covering the same period, according to Col. Welles' report were as follows:

	1892-3.	1891-2.	1890-1.
Wheat	39,737,935	51,355,398	18,292,504
Flaxseed	266,326	67,081	111,378
Corn	362,334	111,337	171,599
Barley	104,916	181,282	104,398
Rye	61,013	31,288	4,501
Oats	47,715	20,608	370,221

	1892-3.	1891-2.	1890-1.
Wheat	34,519,859	46,071,503	16,132,179
Flaxseed	266,326	66,904	111,340
Corn	362,334	111,372	293,430
Barley	81,529	181,549	104,988
Rye	108,122	21,183	
Oats	29,553	20,608	362,470

Receipts and shipments of wheat and flour for four years previous to August 31st are shown in the following figures, with the amount of flour reduced to the equivalent in bushels of wheat and added to the amount of wheat received:

	Wheat, bus.	Flour, bbls.	Wheat and flour, bus.
1890-91.	19,831,107	3,229,469	29,963,717
1891-92.	18,292,504	2,323,222	28,657,003
1892-93.	31,355,398	3,391,954	68,010,161
1893-94.	39,737,928	4,219,244	58,703,526

The figures of the state inspectors do not correspond exactly with those of the Board of Trade. The state figures show the following shipments: Wheat 35,582,158 bus.; corn 301,000; oats 42,000; rye 88,000; barley 116,000; Flax 351. Total 36,570,158.

The production and shipment of flour at Duluth and Superior, and the receipts of flour and grain for August, as compared with the business in August, 1892, is shown by the following:

	1893.	1892.
Flour bbls. produced Dul.	96,807	94,855
Superior	128,080	
received	731,816	628,538
Wheat, bus.	1,508,237	1,181,576
Corn		32,387
Rye		12,635
Barley		5,246
Flax		

The shipments of flour and grain during August this year, as compared with August 1892, were as follows:

	1893.	1892.
Flour shipped Sup. mills	127,590	
" in transit	839,041	675,720
Wheat, bus. shipped	3,850,557	1,924,442
Corn		32,387
Oats		75,151
Rye		
Flax		

Wheat in store in Duluth on Monday Sept. 11 by grades, was as follows:

No. 1 hard	294,905
No. 1 Northern	1,801,878
No. 2	116,490
No. 3 Spring	12,427
No. 3 Spring	11,072
Rejected and Condemned	2,616
Special bin wheat	40,200
Total	2,312,581

Decrease during the week.
In store this date, 1892

When the new wheat began to arrive the elevators were practically empty, and since the first installment the receipts have been heavy. Freight rates have advanced a trifle, yet the movement down the lakes has been active and a brisk shipment is anticipated for the remainder of the season. The abnormally low rate has led to some extraordinary big cargoes from here this season. The straight-back steamer Yuma now carries the banner

from the head of the lakes. This vessel cleared a day or two ago for Buffalo with 114,000 bushels of wheat, beating the record. This is the largest cargo that ever went through the Soo, but the Selwyn Eddy has taken 138,000 bushels from Detroit to Buffalo.

The lack of currency has been something of a drawback in the matter of handling the new crop, yet the difficulties are being overcome and the new wheat is arriving in an unbroken stream from the northwest. The several expediency schemes which were canvassed a month or so ago, among them clearing house certificates etc., have been laid aside for currency of the realm. Every proposition had insurmountable objections and before one that was acceptable in every particular was formulated there was no crying necessity for it. Cash has been pulled out by some means or other and now the grain is being handled by the usual method. It is estimated that Minnesota has 40,000,000 bushels of average grade, which represents \$24,000,000, in the Duluth elevators. That was the amount of wheat handled here last year but for the current crop year the storage capacity has been greatly increased, and now there is no Board of Trade or other organization in the world that has a larger storage capacity for wheat than is under the Duluth Board. It is believed that the elevators would not be compelled to stop receiving wheat on account of a lack of room, as was the case last year.

The Railroad and Warehouse Commissioners of the state have established fees for the coming year as follows: For inspection on arrival or "into store," for each car load 20 cents; for inspection "out of store" from public warehouses, 20 cents per car load to cars; 20 cents per 1,000 bushels to vessels; for inspection out of store, from private warehouses, 30 cents per car load to cars; 60 cents per 1,000 bushels to vessels.

The charges for weighing shall be as follows: For each car load weighed on arrival or "into store," 20 cents; for weighing "out of store," from public warehouses, 20 cents per car load to cars; 60 cents per 1,000 bushels to vessels.

On flax seed the charges shall be as follows: For inspection on arrival or "into store," 65 cents per car load; for inspection out, from public warehouses, 65 cents per car load to cars or per 1,000 bushels to vessels; out of store from private warehouses, \$1.00 per car load to cars or per 1,000 bushels to vessels. The charges for weighing flax seed shall be as provided above for all other kinds of grain.

The season is now so far advanced that the Board of Trade will probably defer building its new block until next season. All arrangements are about completed and if the start is not made this fall, work will begin early next spring. The new Board of Trade building will be the finest structure for a similar purpose in the Northwest.

Col. Welles, secretary of the Board of Trade, is taking a vacation visit to his father, who lives in Ft. Dodge, Iowa. Mr. F. E. Wyman presides at his desk.

The state elevator has not come out of the lawyers' pockets yet, where it was cached by a recent injunction. The site has been purchased here for the communistic building and the appropriation for the erection of the structure will probably be consumed by lawyers, jobbers and politicians.

The North Dakota Elevator Company's houses, with elevators at all the principal stations along the Northern Pacific in North Dakota, have recently been leased by the Monarch Elevator Company of Minneapolis. Approximately there were 78 elevators in the system. These are under the control of F. H. Peavey & Co.

George Spencer, receiver for the Lake Superior Elevator Co. and the Union Improvement and Elevator Co. has taken out licenses for all the elevators of these two companies at Duluth. This brings within the purview of the law every warehouse at the head of the lakes. Chief grain inspector Clausen is authority for the statement that of the 250 private houses in the state but few will be operated on account of a lack of capital by the owners.

The Imperial Mill is running to its full capacity, the first time for many months, and is turning out 6,000 bbls. of flour a day.

H. F. J.

DULUTH, Sept. 12, 1893.

SUPERIOR.

THE flouring mills of Superior have settled the questions of free silver, the tariff, hard times and the like, and have begun business with the first of the new crop year, in earnest. Without an exception the mills report a bright outlook for the fall and winter trade and the largely increasing output for the last two or three weeks is in anticipation of a more active market. The output for August was the heaviest of any month since last October, and thus far in September, the August record, for the same number of days, is beaten. The new mills are not yet regularly installed and may not begin to add their quota to the output until the latter part of the month. The Listman mill has turned over its machinery,

finding everything in excellent shape and is about ready to begin the ceaseless grind. The other new mills are receiving farewell touches by millwrights and workmen. The Lake Superior and Freeman Mills have been furnishing the greater portion of the output for the past two weeks; but the Minkota is now in commission, and it is understood will run at a lively clip from now on. Prices this month have ruled firmer and higher and large orders are being received from both domestic and foreign buyers. A little difficulty has been experienced in securing old wheat for grinding, but now all the mills in readiness are running full time to turn out flour enough to meet demands. The output for August was: Duluth, 66,887; Superior 128,090 bbls; total: 194,987 bbls. There were 734,816 bbls. received and 984,521 bbls. shipped.

The output and exports from the head of the lakes for the past four weeks, with comparisons were as follows:

	1893	1892	1891
Output, bbls.	Exports, bbls.	bbls.	bbls.
Sept. 3.....	44,083	10,704	19,262
Aug. 26.....	30,167	11,718	21,731
Aug. 19.....	38,754	15,143	21,811
Aug. 12.....	42,205	21,318	20,860

The figures for the week ending Sept. 9 are as follows:

Mills	Product'd	Shipp'd	In Store
Duluth, bbls.....	29,417	18,624	15,022
Superior, bbls.....	27,900	27,400	2,000
Total, bbls.....	48,317	46,024	17,022

RAILROAD REPORT, (FLOUR IN TRANSIT.)		
Road.	Received	Shipp'd
St. P. & D.....	49,471	42,715
North Pacific.....	10,200	7,200
Eastern Minn.....	94,940	44,851
C. M. St. P. & O.....	22,050	9,600
Totals.....	176,661	104,366

The wheat market for the past week has had a more vigorous tone and prices have been gradually tending upward. The receipts last week were 850,900 bushels at Minneapolis and 1,039,350 bushels at Duluth and Superior. Total 1,890,250 bushels against 789,627 bushels the week before, 764,439 bushels two weeks ago and 1,347,500 bushels the same time last year. Out of the 1,270 cars received during the week 598 were new wheat and all but 50 cars graded No. 1 northern. During the same week last year 701 cars of new wheat were sold and only 312 went No. 1 northern, the balance being below, mostly No. 2 northern. The shipments during the week were 241,200 bushels from Minneapolis and 769,818 from the head of the lakes.

The total stocks in second hands in the northwest:

	Bushels.
In Minneapolis regular houses.....	5,565,239
In Minneapolis private houses.....	530,000
In Duluth and Superior in store.....	2,512,384
In country elevators, approximately.....	975,000
Total.....	9,582,623
Total August 1.....	16,029,864
Total July 1.....	19,320,427
Total June 1.....	20,310,820
Total May 1.....	41,498,741

The lake and rail rate on flour still holds at the 15-cent basis to New York, and this figure is likely to be maintained until the

closing weeks of navigation, when an advance to 20 cents may be made. The rate to various eastern points, according to the new tariff sheets, are as follows, in cents per 100 lbs:

New York and N. Y. rate points.....	15
Boston and Boston rate points.....	17
Boston for export.....	15
Philadelphia and Phila. rate points.....	13
Baltimore rate points.....	12
Birmingham rate points.....	13
Albany, Troy and Schenectady.....	14
Utica, Syracuse and Rochester.....	12 1/2
Cornell.....	12
Elmira rate points.....	13
Buffalo and Erie.....	10

It is stated that at a recent meeting of eastern railroad lines at Chicago, the situation was discussed and letters are said to have been sent out for the purpose of whipping trunk line officials into the mood to advance rates on the lakes, coupled with the threat that if it was not done the Chicago lines would reduce rates sufficiently to secure the business. It is the general opinion here that no immediate action will be taken by the trunk systems.

It has been finally decided to establish a sample market in this city and it is a move in the right direction. It has always been the opinion of millers and grain men that Superior is a desirable place for a sample wheat market and that it would eventually be the largest market at the head of the lakes. The conditions necessary, however, were never present to warrant it heretofore, but these have been supplied by the mills that are now in operation and others that soon will be, and the initial steps to organize such a market have been taken. The committee having had the matter under advisement, Messrs. Hurd, McCollum and Barton, after carefully considering the proposition decided to go ahead, and so reported. Arrangements have been made to procure quotations and the board will be established for the present in the Brenning block, where rooms have been offered free of rent for the next six months. Mr. Hurd states that it is unsatisfactory for the mills to buy on grade, and that when he could get the wheat he wanted for the Daisy mill on the Superior board he would make such purchases from Superior commission men. J. J. Atkinson will act as manager of the board.

Superior is fast becoming the favorite market at the head of the lakes. A day or two ago W. F. Pinkham, one of the largest farmers of Cass county, North Dakota, arrived in the city with a car load of wheat of his own raising which he sold to good advantage. He said that Superior's fame—her big mills and big elevators—was well known among the farmers of his section of the country, and that a good deal of wheat would be sent through by the farmers direct. Speaking of the wheat crop he said: "In Cass county the average will not be above 13 bushels, but the quality is

fine. In the Grand Forks country the yield is heavy and the quality good." Mr. Pinkham owns 1,000 acres near Fargo.

A committee of grain and flour men will visit St. Paul this week to ask the Great Northern Railroad management to grant the same facilities for handling wheat that are granted by the Northern Pacific and the St. Paul & Duluth roads. These two roads hold up their cars in the upper yard where they are inspected and thence shipped to their several destinations without extra charge. The Great Northern sends cars down into the lower yard near the elevators, and after inspection, wheat that is not consigned to the elevators is subjected to a switching charge of \$3 a car. The Great Northern will be petitioned to at least hold out cars in the upper yard that have been consigned to Superior dealers, whence, after inspection they may be switched to their proper destinations.

A meeting of the directors of the Listman mill was held last week to discuss matters on the completion of their fine mill plant. There were present William Listman of La Crosse, Charles Listman of Chicago, J. H. Knowles of Boston and James Barton of Superior. It was decided to make the permanent start as soon as the dredging could be completed in the slip adjoining the mill, and other matters had been put in ship-shape for convenient and economical work. It is expected that by the 20th of this month the mill will be in full operation, and it is the announced intention to run day and night.

With reference to the rumored retirement of C. S. Pillsbury from the management of the system of mills and elevators which he sold to English capitalists, the mill men here think there is no foundation for it. J. S. Hillyer stated that it was doubtful if Mr. Pillsbury would give up his \$50,000 position to engage in the building scheme at Buffalo. "Buffalo" said Mr. Hillyer, "is not equal to the head of the lakes. Strong inducements were held out to us to locate at Buffalo instead of Superior. My own judgment is that Superior will always be the best place in America for a large flouring mill. It is the nearest water point to the greatest wheat belt on this continent and within a few years I expect to see flour consigned directly from our docks to European ports. When that time comes Buffalo will be distanced in the milling business."

The Belt-line elevator has started business and is receiving wheat. William Erick is superintendent and R. F. Edwards is foreman; George Cross will have charge of the weighing department. Busi-

ness has commenced with a small crew, to be increased from time to time. Wheat is coming in rapidly.

About 100 cars of new wheat per day are arriving at the Sawyer system. The size of the grain car is increasing. Formerly 300 to 350 bushels was a car load, but the new Great Northern grain cars are bringing in 1,000 bushels each, which means with these cars, 100 cars 100,000 bushels of wheat.

The following figures of the traffic through the "Soo" are for August and give a fair idea of the lake business for that month:

Eastbound freight, 1,109,252 tons; westbound freight, 470,858 tons; total, 1,580,110 tons. There were 2,744 passengers went eastward and 2,916 came westward.

The eastbound freight was as follows: Flour, 964,845 bbls.; corn, 208,400 bus.; wheat, 4,369,885 bus.; building stone, 3,047 tons; copper, 13,671 tons; iron ore, 688,840 tons; pig iron, 5,067 tons; lumber, 81,000,000 feet; silver ore, 255 tons; unclassified freight, 24,786 tons. The westbound freight was as follows: Coal, 420,593 tons; flour, 565 bbls.; grain, 4,350 bus.; manufactured iron, 15,283 tons; salt, 12,771 bbls.; unclassified freight, 32,429 tons.

It is estimated that there are on the docks in this city 765,000 tons of coal, with room for 400,000 tons more. The coal receipts at the head of the lakes are not as large as they were at this time last year and the shipping to the close of the season, will be lively.

The barge works, where the famous wheat-carrying whalebacks are made, have started up again after a suspension of two months. A small force of men has been put to work which will be augmented until the full crew is employed. It is the intention of Capt. McDougal to turn out a number of handsome vessels this winter in anticipation of a big trade on the great lakes next year.

The Northern Pacific railroad, with two trains, is bringing about 150 cars of gravel a day to their yards at the east end, expending about \$100,000 on the yards this season. The improvements which that road will make to its property in this city next year, are estimated to cost a half million dollars. All these improvements will facilitate the handling of wheat and flour and will tend to constantly reduce the transportation charges. Other companies are also on the alert to make Superior an economical, profitable and ideal milling point, and to build up a traffic in that line second to no other city in the world. J. F. H.

SUPERIOR, Sept. 13, 1893.

ST. LOUIS.

The wheat market is at present stronger than it has been for months. Cash wheat is ruling particularly good, selling for as high as 68½¢, a raise of nearly 15¢ from bottom prices. During the past month however, the wheat market has led a very uneven existence. A month ago it was still laboring under the baneful influence of the financial stringency, yet August sold at 60¢, September at 62½¢ and December at 70½¢. A week later prices had dropped 2½¢ cents in spite of the light movement, decreased supply and the fact that the exports were larger than at any previous time this season. The following week the decline continued and on Friday, August 26, August sold for 57½¢; September for 60¢ and December for 65¢. By that time every long had sold out and there was more of a shortage than ever. The next week found wheat stuck in the same low rut and almost impossible to attract any outside interest thereto.

So poor were the prospects that speculators admitted that they expected no improvement in the situation until spring and they expected cash wheat to remain as low as 60¢ till New Years. In this, however, they were agreeably disappointed, as cash wheat soon developed into a very cheerful feature, the demand for it steadily increased until this week it has become remarkably steady. In the past two weeks, though, somebody has been steadily slugging wheat. The selling was especially conspicuous. Every time December wheat would rear its head, a flood of offerings would sweep would-be buyers. The house of D. R. Francis & Co. sold an immense amount of wheat, part of which they had laid in about three weeks before, when the Ex-Gov. and H. C. Haarsteck were buying all the wheat in sight. Of late Francis and Armour are credited with a determination to prevent an advance in wheat by flooding the market with supplies. All in all, however, the wheat outlook is very fair, with cash wheat looking particularly bright.

The millers are feeling somewhat jubilant over the recent turn in the tide. The flour market which has been on the down grade for the past few months suddenly reversed itself last week and is tending strongly the other way. All through August trade was very poor, and although during one week the local mills had an output of 90,900 bbls. out of a possible 105,750 it was mainly to fill old orders. In the week from Aug. 13-19 the flour market was pronounced the dullest

of the season, and it was moreover remarked that no improvement need be looked for till the financial difficulties were settled. Toward the end of August however, the market grew a shade better, and on the first of September the improvement continued and right smart export demand was one symptom of the new condition. Many sales were made on small margins but the appreciation in the rates of exchange and the reduction of freight rates made it possible for the local millers to accept bids made. Many bookings were made for English and Irish ports and also for the Continent. The output, the first week in September, was 95,200 bbls., a gain of 20,000 over the preceeding week.

The past two weeks, flour ruled very satisfactory, large lumps being sent to British and Irish points, as the present rates of exchange operate in favor of the seller. Quite an increase was noticed in the demand for domestic points. Mr. S. C. Buckingham, Secretary of the St. Louis Milling Co. when asked his opinion of the situation said: "The outlook is very fair, but until the prices of flour have risen somewhat, they have not risen as high as I expected they should in proportion to the rise in wheat. Cash wheat is now 13 cents above bottom prices while flour is only up 25 to 30 cents a barrel. It should be higher almost 50 cents."

There are few happenings of interest among the local flour fraternity. No new mills have been opened during the past month or anything else of importance transpired. Our big St. Louis Exposition opened the other night though, and the inaugural address was made by a miller, Ex-Gov. E. O. Stanard, President of the Standard Milling Co. Gov. Stanard is one of our most prominent and public spirited citizens and though he attends closely to his large business interests he always finds time to take part in any popular movement and push it to a successful issue.

Harold Meredith Kauffman, son of the millionaire miller, John W. Kauffman, will not go into business with his father here, but leaves in a few days for Yale to take the classical course there. He is one of the best foot-ball players in town and his many friends here expect to see him distinguish himself in the east.

H. W. Chandler, the well known grain speculator has gone into the electrical business as a side issue. He is general manager of the Mississippi Valley Electric Co., and has an interest in the Woods' Electrolier and electric lamps.

St. Louis, Sept. 14, 1893.

A JAPAN ROLLER MILL.

The following account is taken from a recent number of the *London and China Telegraph*:

A new industry has appeared in the Nagasaki in the form of the steam roller flour mill which has been running now for two years, being about the only mill of the kind east of Penang. The inception of this industry is due to a few of the energetic old residents of Nagasaki, who fancied they saw a good chance of making it pay. Plans were prepared, the necessary capital was raised, the co-operation of eminent Japanese business men was secured, the buildings erected and fitted up with machinery which embraced the very latest English, American and Australian patents and improvements, being constructed on the Hungarian roller principle. A visitor at the mill is at once struck by the cleanliness and comparative quiet of the establishment. There is scarcely a trace of flour dust to be seen, and there seems to be a strange absence of operatives, as the machinery is automatic, and very little manual labor is required. On the first floor may be seen a native feeding the machine with the grain from sacks just as it arrives from the country, and on the ground floor may be seen another native workman disposing of sacks of flour which have been automatically filled to an exact weight by the machine, after the shoot has been fitted with an empty sack by a native woman. So that with the exception of an engineer in charge and an assistant engaged in oiling the machinery, the three natives above referred to are the only persons engaged in making the flour. Dirt and extraneous matter is separated from the grain and disappears in one direction, sharps and bran in others, and three qualities of flour in yet others, till it reaches the sacks. The mill is lighted by electric light, and work is kept up continuously for 18 hours a day, the output averaging during that time 475 quarter sacks of flour, 17 piculs of sharps, and 70 piculs of bran. The flour is made from Japanese wheat only, and is remarkable for its strength and for the sweet and excellent bread that results from its use. Experience has proved that most excellent bread is made from a mixture of Californian (Sperry) and Nagasaki flour, which also gives in making an increase to 40 per cent. The French fleet use the Nagasaki flour, which in itself is no slight recommendation, and it is very largely used in Yokohama, and Hong Kong, where its quality is highly appreciated. The sharps and bran also find a ready sale at Yokohama and Hong Kong.

WAREHOUSE RECEIPTS.

Judge Williams Gives an Opinion of Interest to Grain Men.

Judge Williams, of the United States Supreme court, handed down an opinion which the farmers will heartily endorse. It is that the Northern Pacific Elevator company is a mere bailee as to the wheat received from farmers, and is legally bound to return the wheat to the farmers upon the latter's presentation of the receipt from the company. As to the warehouse receipts delivered as security for money the elevator company, so Judge Williams holds, is practically a chattel mortgagor, and if it issued the receipts without being in possession of the wheat it had committed a fraud, or if it had wheat on hand at the time it issued the receipts and subsequently disposed of the same, it had misappropriated the wheat.

The point came up on the application of Receiver Forbes, of the Northern Pacific Elevator company, for an order allowing him to distribute to the farmers the wheat they had actually delivered to the company upon the return to the company of its receipts. The creditors of the company objected to the application because it gave the owners of wheat receipts a preference over the holders of warehouse receipts.

The decision of the court will effect about 240,000 bushels of wheat due to the farmers. The company has borrowed about \$1,100,000 and has issued warehouse receipts to secure the same to the amount of 1,750,000 bushels. The shortage in the wheat is about 500,000 bushels. The company claims that at the time it issued the warehouse receipts it had the wheat on hand, and that the shortage arose from the settlement of the May corner in Chicago.—*Minneapolis Tribune*.

CHEAP WHEAT.

Wheat threatens to become cheaper every year in price and farmers realize that they must be willing to accept less than formerly for this product. The competition is stronger and the annual production on the average is steadily increasing. Not a few farmers seem to think that it would be a losing game to sell wheat for anything less than they have been receiving during the last few years. There are many grumblers who claim that nothing but ruin stares the wheat growers in the face and that it is better to get out of the business at once. It might be said in reply to this that there is not a business in existence which is not claimed by some to be at the extreme end of profit, and that shortly everything must go to smash.

Now, the fact is, that wheat

growers must expect to get even less for their wheat in the future than they are receiving now, and they will make a fair profit off it. In parts of the West farmers are making money if they receive 45 cents a bushel for their wheat, and they claim it only costs them from 18 to 22 cents a bushel to raise it. This is a fair profit, and sufficient to repay them for all their troubles. This is an illustration of what can be done where the soil and climate are favorable. Now, a quarter of a century ago, the thought of receiving only 45 cents per bushel for wheat would have dumbfounded many a farmer, and they would have promptly answered that such a farmer would be a fool, for he would surely run in debt.

As our soils are improved by proper cultivation, enriched by vegetable and mineral fertilizers, and the whole business conducted in the light of modern discoveries, our wheat producers will find that they will bring about the conditions for growing wheat which makes it possible to-day for some farmers in the great wheat belt to make money when the cereal is selling for 45 cents per bushel. We are getting a higher average from an acre devoted to the culture of wheat nearly every year, and at a less relative cost. We increase the crop by improving the breed of wheat, and then give superior cultivation that surrounds the plants with even more favorable conditions than those existing naturally in the wheat belt.

The cost of fertilization of wheat is slowly being solved. We find that a rotation of crops properly grown gives the best results, and then we can save expenses by buying the crude materials of fertilizers that are especially needed for wheat plants. In a hundred different ways such as these we increase the yield per acre, and then by reducing expenses to a minimum we find that there is still a margin for profit. Most of the farmers who are continually grumbling about no profit in wheat cannot tell for the life of them how much it costs them to raise a bushel of wheat. They know what they get for it and that is all. How do they know there is no profit in wheat growing? Unless they have an accurate idea of what it costs them to raise a bushel of wheat, they can only guess at the profit or loss.—A. B. BARRETT, in *Chicago Journal*.

THE PRESERVATION OF FLOUR.

Mr. Ludvig Fromm, of Kotschenbroda, Germany, has obtained a patent for a new method of preserving farinaceous products. In his specification he says:—"This invention relates to a method of preserving flour and farinaceous products, and consists in the ad-

mixture to the substance to be preserved of a powder or 'flour' of hazel nut. This method of preservation will prove of great value when used in storing up any kind of flour or kindred substances, and also baked goods, such as rusks or biscuits used in the army and navy; and it will also apply in case of vegetable or leguminous conserves, such as tinned vegetables, soup tablets, peas pudding and the like. In preparing the hazel nut flour, the kernels are first removed from the shell, and then (preferably after being roasted) are ground or reduced to powder; only the white substance of the kernel however is ground. This powder or flour is added to the goods to be preserved—cereals, pulse, or the like—in a proportion varying between 5 and 25 per cent, care being taken that the mixture is as thorough as possible, as it is important that the fatty element of the powdered hazel nuts shall pervade or permeate the whole of the substance. This fat does not become rancid, and at the same time acts as a deterrent against insects and caterpillars. The flour so mixed acquires, moreover, a property which enables the bread or other goods made of it to keep much longer than similar goods made of ordinary flour, the fatty or oily element preventing the absorption of moisture to a great extent, and consequently the formation of mould, mildew, or similar growths. Besides, the great quantities of albumen and fat contained in the hazel nut pulp enhance the value of flour or other product as such; as nutritious substances, however good in themselves, will only be fully taken advantage of by constitution of the body if the albumen and fat they contain are in the normal proportion to the hydrates of carbon.

MYSTERIES OF BREAD MAKING.

Less than one hundred years ago little or nothing was known about bread making—that is, no living man could account for its phenomena or give any explanation of any of its processes. Away back in the forties the first step was made in the discovery that yeast was a vegetable, a living growing plant. Here the door was opened, for further discoveries were forthcoming. Not that men of science were idle or sparing of their labor; neither were they crippled for want of means. Vast interests were involved, and science was fostered with a liberality seldom equalled in any other direction. Fermentation remained a mystery, and its king and queen, beer and wine, were the victims of unaccountable disease. After years of experience as a baker, during which

time I have conversed with hundreds of fellow-workers, writes a correspondent, I have come to the conclusion that there is no branch of manufacture so little understood by its craftsmen as bread making. Any practical baker knows very well what he is about, and what is going to happen, although he may not be clever at giving explanations. His trade teaches him habits of close observation. He knows at a glance whether his work is going on right or not, but he is not clear at explaining. He knows what flour is, and he can give a fair account of its origin, manufacture and general properties. But the yeast which he adds to the flour, and which is the moving power in his hands—does he know what this is and how it acts on his flour? If he does I have never been able to get the definition out of him. Now, how is this state of things accounted for? Chiefly, I think, because bread making is one of the oldest of arts. If it were possible now for bread making to come out as a new art it would be pounced on by men of science and investigated. A good loaf of bread is the result of many conditions. The flour must be good, the fermentation must be carried to its proper stage and no further. The oven has its private character; but the yeast is the backbone of all. Fancy loaves and cakes have become fashionable in these latter days, and it requires the skill of an experienced baker to mould a cake that will be attractive, and which will be suitable to place upon the banquet table at some notable gathering.—*Confectioners Union*.

THE Novelty Mill Co., of Seattle, Wash., has increased its capital stock to \$75,000 and has embarked in the China trade, making a first shipment of 800 sacks by the Northern Pacific steamship Tacoma.

Wenatchee, Wash., offers liberal inducements to parties who will erect a flouring mill there.

New Whatcom, Wash., has guaranteed eastern parties, who desired to locate a flouring mill there, the proposed \$6,000 bonus, and the mill seems assured. The next move will be to secure an oat meal and fruit cannery.

The Yakima Milling company, of Yakima, Wash., advances a proposition to care for the 50,000 bushels of grain in the vicinity of North Yakima, paying fifty cents a bushel for it, or fully 10 cents above the market price for export, providing the merchants of the city will agree to handle the products of the mill in preference to that manufactured from cheaper grain shipped in from the outside.—*Commercial Review*, Portland, Oregon.

DECIDED IN THE COURTS.

RIGHTS OF DIFFERENT OWNERS AS TO CONDITION OF WATER COURSE.—The Natural Right to have the water of a stream descend in its pure state must yield to the equal right of those above. Their use of the stream for mill purposes and other manifold purposes for which they may lawfully use it tender to render it more or less impure. The water may thus be rendered unfit for many uses for which it had before been suitable; but, so far as that condition results from reasonable use of the stream in accordance with the common right, the lower riparian owner has no remedy. When the population becomes dense, and towns or villages gather around its banks, the stream naturally suffers still greater deterioration. Against such injury, incident as it is to the growth and industrial prosperity of the community, the law affords no redress. So in cities and towns, with their numerous inhabitants and diversified business, with their mills, shops and factories, with their streets and sewers, all the products and means of a high civilization, it would be impossible that the pure streams that flow in from the farmsides, should remain uncontaminated; and those that live upon the lower banks of such streams must, for the general good, abide the necessary results of such causes.—Bernard V. Shirly. Supreme Court of Indiana 34 N. E. Rep. 605.

EASEMENTS IN WATER.—The right which a party has to the use of water flowing over his own land is undoubtedly identified with the realty, and is a real or corporeal hereditament, and not an easement. The right is inseparably annexed to the soil, and is parcel of the land itself. But no proprietor has the right to use the water to the prejudice of any other proprietor above or below him, unless he has acquired a right to use the water in some peculiar manner, and differently from what he would be entitled to do as mere riparian proprietor. This right he may acquire, by an actual grant or license from the proprietor affected by his operations, or by uninterrupted adverse enjoyment for such a length of time as would afford a presumption of a grant, which in most of the States is a period of twenty years; in other words, an easement is created in favor of the owner of the dominant estate. An easement to foul or corrupt the water of a stream may thus be acquired; so of an easement to discharge water upon the land of another, either by an artificial channel, or by a pipe, or by drip from a roof; or to maintain

water at a given height in a mill-dam; and a mill owner may thus acquire a right to discharge water from his mill by a raceway through the land of another. And a right to maintain an aqueduct through another's land may be acquired by a user of twenty years or more. So the right to throw water upon the land of another may be acquired by a grant, and long usage may be evidence of such a grant. A title may be gained by twenty years' user, as well to artificial water-courses as to natural ones and it was held that the proprietor of lands below may, by prescription, acquire the right to have water, which in its natural course flowed through and over his lands, diverted from its natural course, and thrown back upon the lands of the proprietor above. But the doctrine of prescription, or presumption of a grant from lapse of time, has not been deemed applicable to the case of underground waters percolating through the earth. As it respects such waters, no rights are gained, since no one can be presumed to have granted that of the existence of which he must have been ignorant.

BOILER EXPLOSIONS.

It is indisputable that the number of boiler explosions in this country is alarmingly great, and it is equally true that a boiler does not explode without there being a very good reason for it—a very good reason and a very simple one. There was a time when it was believed by many that there were hidden causes for many boiler explosions, and a rather flourishing, if not remunerative business was done in the theoretical manufacture of some mysterious gas that never could be made to materialize except just at the time when no one had time to detect its presence, and the boiler went to pieces. There are, perhaps, still a few left who believe in the gas theory of boiler explosions, but their number is very small indeed, so small as to make no impression on current opinion. An overwhelming majority of engineers, at the present day, believe that if the cause of a boiler explosion is looked after in the right way, it will be found without the necessity of making some old gas theory do service, or inventing a new one; without bringing into the argument any unaccountable or unheard-of action of the water, or in any way going outside of what plain people can understand.

It would seem that, with rather clear sailing in the matter, with the knowledge that a boiler lets go just as, and for the same cause that, steel or iron in any construction fails,

boiler explosions would be something of the past, but after all bridges fail and chains break, because well known laws are not complied with, or approved practice followed, and so, too, boilers explode.

Safety in the use of a boiler is assured by proper construction in the first place, and correct practice in attention to and maintenance of it afterward.

This is easy to say and ought to be as easy enough of accomplishment, but the everyday record of boiler explosions shows a great amount of ignorance and carelessness in these matters—either this or something worse.

Rigidly enforced inspection and license laws ought to provide the needed remedy, but it seems about impossible to secure such laws except in rare instances. Engineers, who ought to know their value, have worked for them for years, but with very indifferent success. Money and politics are against them, and money and politics generally win. The objections of boiler owners to laws that would bring about inspection of boilers and licensing of engineers are money objections, and politics is the means of preventing the passage of such laws. The history of the attempts of engineers to bring about the enactment of laws to the end named would be interesting if published. Promises to the desired end are the easiest thing in the world to obtain from legislators, but there is no intention of keeping such promises, and the really interesting, and what would be instructive thing if published, would be the ingenious manner in which these promises are broken while the semblance of keeping them is maintained. There is little hope for protection against boiler explosions through general laws for inspection and license.

There is one other plan against which boiler users could not very well object. Admitting that inspection will cost them something, and that a properly qualified engineer cannot be hired to work for as little money as a man who knows nothing in particular about the business, still these grounds for objection would be untenable except that they do not believe their boilers will explode; in fact, we are rather bound to believe that they would not endanger life for the saving of a few dollars. Then let there be a law that shall provide for determining the exact cause of every boiler explosion and provision for publishing this cause. If Mr. Smith's boiler disastrously fails, because he has neglected to have it kept in proper repair,

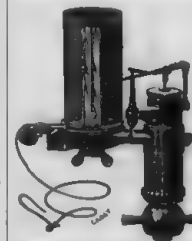
American Steam Gauge Co.

Sole Manufacturers

BOURDON
STEAM GAUGES.

WITH LANE'S IMPROVEMENT.

XXXXXXXXXXXXXXXXXXXX

THOMPSON'S
IMPROVED
INDICATOR.Over 2,500 in
use.

XXXXXXXXXXXXXXXXXXXX

American Pop Safety Valves

For Locomotive, Stationary and Portable
Boilers, and Instruments Incidental to
the use of Steam.

Send for Price List I.

36 CHARDON ST.,

SEND FOR CATALOGUE K. BOSTON, MASS.

BRANCHES:

NEW YORK, N.Y., CHICAGO, ILL.,
51 John Street, 16 N. Canal St.

THE VILTER MFG. CO.

Builders of Improved

Corliss Engines,

MILWAUKEE, WIS.

High Pressure,
Condensing,
Compound-
Condensing and
Triple Expansion.

or because he put it in charge of Incompetency, or because he failed to have it examined in a way to determine its condition, let Mr. Smith's full name and location, together with all the facts in the case, be published by authority. He could not object to the passage of such a law, one of the provisions of which should be that nothing should be disturbed about the surroundings of the explosion until after full legal investigation, because his boiler is one of those that is not to explode. In other words, those who objected to such a law would—if the rather common expression may be used—give themselves away.

We are of the opinion that the enforcement of such a law without the attachment of any penalty except one against failing to report an accident to a boiler, or placing obstacles in the way of investigation, would result in a rather remarkable decrease in the number of boiler explosions. There are quite frequently—most generally—circumstances connected with such disasters that would not look well in print, authoritatively circulated. A remedy is wanted. We submit this.—*American Machinist.*

MILL PICKS

I am one of The Oldest and the Most Extensive Mill Pick Maker in the United States.

— 35 YEARS EXPERIENCE. —

I keep on hand a large stock of new Picks of all sizes.

OLD PICKS DRESSED AND RETURNED PROMPTLY

New Picks will be sent to all parts of the country on trial, and if not first-class, return them at my expense.

AN OFFER

To any miller who has never had any of my work I will dress Six Picks Free of charge.

Write for price and other information. Ship Picks to the Old, Reliable Mill Pick Maker,

W. S. CASTERLIN,

10-44 Luzerne, Luzerne Co., Pa.

RIPANS
TABULES

REGULATE THE
STOMACH, LIVER AND BOWELS
AND PURIFY THE BLOOD.

RIPANS TABULES are the best Medicine known for Indigestion, Bilelessness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Bilelessness, Bad Complexion, Bystery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels. Ripans Tablets contain nothing injurious to the most delicate constitution. Are pleasant to take, safe, effective, and give immediate relief. Price—Box (6 vials), 75 cents; Package (6 boxes), \$2. May be ordered through nearest druggist, or by mail. Sample free by mail. Address THE RIPANS CHEMICAL CO., 19 SPRING STREET, NEW YORK CITY.



Scientific American
Agency for

PATENTS
CAVEATS,
TRADE MARKS,
DESIGN PATENTS,
COPYRIGHTS, etc.

For information and free Handbook write to MUNN & CO., 361 BROADWAY, NEW YORK. Oldest bureau for securing patents in America. Every patent taken out by us is brought before the public by a notice given free of charge in the

Scientific American

Largest circulation of any scientific paper in the world. Splendidly illustrated. No intelligent man should be without it. Weekly, \$3.00 a year; \$1.00 six months. Address MUNN & CO., PUBLISHERS, 361 Broadway, New York City.

ROPP'S CALCULATOR

[Revised Edition for 1890.]



This book with its numerous tables, short cuts in figures, etc., is simply invaluable to Millers, Grain Dealers, Farmers and Business men generally. Prices, post-paid, as follows: No. 1, Bound in waterproof leatherette, 50 cents. No. 2, Fine artificial leather, with pocket, silicate slate and account book, 75 cents. No. 3 American Russia or Morocco, with pocket, slate and RENEWABLE account book, \$1.00. Address,

UNITED STATES MILLER,
MILWAUKEE, WIS.

ALL persons desiring to reach the entire flour and grain trade, by circular or otherwise, should obtain a copy of "Cawker's American Flour Mill and Grain Elevator Directory for 1892-93." Address THE UNITED STATES MILLER, publisher, 69-c Mitchell Bldg., Milwaukee, Wis.

JAMES LEFFEL



WATER WHEELS

110 Styles and Sizes, Upright and Horizontal.

30 YEARS' CONTINUOUS BUSINESS

affords every facility for making them.

Specialized adapted to all Purposes and Situations.

Flour Milling, Mining and Manufacturing.

Plants of all kinds driven by them. Easy working gates. We guarantee highest power with smallest quantity of water, at full and part gates; insuring easy regulation and steady motion. Successfully operating under heads of 2 to 400 ft. Write us for fine pamphlet and state your wants.

THE JAMES LEFFEL & CO.
SPRINGFIELD, OHIO, U. S. A. or 110 Liberty St., New York City.

WANTED.

MILWAUKEE MILLERS.

AN important, reliable Flour Importing house in the Eastern part of Scotland wishes to open business relations, on usual documentary c. i. f. terms, with a Milwaukee miller of good standing. References at disposal. Appl. to Editor of UNITED STATES MILLER, 69-c Mitchell Building, Milwaukee, Wis.

PATENTS

Caveats, Trade-marks, Design Patents, Copyrights,

And all Patent business conducted for

MODERATE FEES.

Information and advice given to inventors without charge. Address

PRESS CLAIMS CO.,
JOHN WEDDERBURN,
Managing Attorney,

P. O. Box 463.

WASHINGTON, D. C.

This Company is managed by a combination of the largest and most influential newspapers in the United States, for the express purpose of protecting their subscribers against unscrupulous and incompetent Patent Agents, and each paper printing this advertisement vouches for the responsibility and high standing of the Press Claims Company.

DO YOU INTEND TO BUILD?
PRACTICAL LOW-COST HOUSES. HOW TO BUILD THEM.



A Large Atlas, containing drawings and floor plans of 40 Modern Houses with Correct Estimates of cost of building. All kinds of buildings ranging from a \$400 cottage to a \$10,000 residence. The latest, most complete, and only practical book published. It is false economy to attempt to build without these plans.

Price by mail, post-paid, 50 cts. Stamps taken.

Address,

The United States Miller,

MILWAUKEE, WIS.

READ THE
NEW YORK
Daily Commercial Bulletin.

Its reputation as the most reliable commercial paper is conceded by all.

SAMPLE COPIES FREE.

Its market reports are the most complete and trustworthy of any published and cover all trades.

SAVE YOUR MONEY

by subscribing to the "Daily Commercial Bulletin" and read its reports of the New York Markets.

PRICE:

	Per Year.	Six Mos.
Daily.	\$12.00	\$6.50
Tri-Weekly.	6.75	3.50
Semi-Weekly.	5.00	2.75

ADDRESS:

New York Daily Bulletin Association,
No. 32 BROADWAY, NEW YORK CITY.

FOR SALE OR FOR RENT.

FOR SALE—The flour mill known as the "MODEL MILLS," Rochester, N. Y., 20 barrels, winter and spring wheat, roller and stone process, modern machinery in good repair, good water power, long lease on easy terms, good custom trade. Must be sold to close an estate. Apply to C. D. Klehel and John H. Campbell, Executors, 333 Wilder Building, Rochester, N. Y.

FOR SALE—The "PIONEER MILLS," Washington, D. C. This is a 500 barrel full roller mill, built according to the Edw. P. Mills system. First-class water power. Machinery of the most modern and improved patterns. Railway connections first-class. For full particulars address, **AUSTIN HERR,** Washington, D. C.

STONE DRESSER WANTED.

WANTED—A miller, who thoroughly understands stone dressing, to take charge of a Three-run Mineral Paint mill. Permanent situation for a suitable man. Call on or address,

W. J. KNOX,
120 Fifteenth St., MILWAUKEE, WIS.

SITUATIONS WANTED.

MILLER AND MILLWRIGHT, owning a set of tools and capable of making general mill repairs, desires a situation in the Northwestern part of the United States. Is best acquainted with the Hungarian process, but competent in all kinds of grinding. Twenty-nine years of age. Three years in U. S. Speaks English, German and Bohemian. Address, **F. L. KOPRIVA,** Gilmerton, Norfolk Co., Va.

A MILLER, capable of taking full charge of a set of tools and capable of making capacity, desires a situation. First-class references furnished. Address, **J. W. MUNDAY,** Huron, Ind.

WANTED—A thorough miller and millwright desires a situation. References furnished if desired. Address, **MILLER & MILLWRIGHT,** Box 123, Nashville, Tenn.

WANTED—A change by a competent miller with 15 years' experience in good mills. Am a young married man, now managing a successful mill. One year in this position; three years in last as foreman of a 150 barrel mill. Have a complete kit of tools, and do repairing. References furnished. Correspondence solicited, from Nebraska especially. Address, **S. C. EARNEST,** St. Joseph, Mo.

WANTED—A situation by an experienced miller, single man. Hard wheat country preferred. References, Guthrie Bros. Can go at once. Address, **W. A. PARK,** Box 73, Superior, Neb.

A COMPETENT MILLER

Who has had 20 years' experience in the manufacture of flour and corn meal, wants a position. If in need of such a man, or having any information that would lead to a beneficial result, please address, **ERNEST BAUER,** 934 Russell Ave., St. Louis, Mo.

DEALERS.

WM. L. BOYD. **ALBERT L. BOYD.**

WM. L. BOYD & BRO.,

GENERAL COMMISSION MERCHANTS,

FLOUR, GRAIN AND MILL FEED,

208 Spear's Wharf, BALTIMORE, MD.

We make a specialty of Flour and Mill Feed. Our trade on the medium and lower grades of Flour by far exceeds the supply at all times. Millers having a surplus would do well in sending samples and consulting us first, before disposing of same. Liberal advances made on consignments. REFERENCES: BALTIMORE BANKS.

GEO. W. PHILLIPS, JR.,

Commission Merchant in

FLOUR AND GRAIN,

785 THE ROOKERY,

CHICAGO.

C. CAESAR & CO.,

GRAIN EXPORTERS,

30 North Front St.,

PORTLAND, ORE.

S. S. LINTON & CO.,

Grain Commission Merchants,

42 Board of Trade, DULUTH,

46 Chamber of Commerce,

MINNEAPOLIS.

H. W. PARRISH,

MONTGOMERY, ALA.

Solicits Correspondence looking to the

FLOUR, GRAIN, HAY,

ETC., ETC., ETC.

H. R. STROEMER,

Grain and Provision Broker,

MACON, GA.

CORRESPONDENCE SOLICITED.

Reference: Exchange Bank, or any other bank in Macon.

F. O. TREPAGNIER. **EDWARD BRES.**

Established 1844.

TREPAGNIER & BRES,

DEALERS IN

Provisions and Western Produce,

81 MAGAZINE STREET,

Near Poydras. NEW ORLEANS.

SPECIAL OFFER TO OUR READERS.

By Special Arrangement with the Publishers We Offer You

Home and Country Magazine

Regular Price 25 Cents a Copy, or \$4.50 a Year,

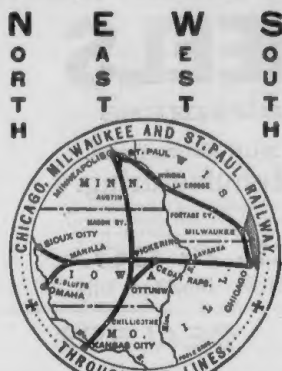
Six Months for Only 75 Cents; Three Months for Only 40 Cents.

See Advertisement in Another Part of This Paper.

ALWAYS USE THE BLANK BELOW WHEN ORDERING.

Gentlemen: Please send "Home and Country Magazine" for _____ months to _____

Date _____ 1893. Amt. herewith _____ cents.



GEO. H. HEAFFORD, General Passenger Agent.
J. H. MILAND, General Freight Agent.
CHICAGO, ILL.

W. J. BOYLE, City Pass. and Ticket Agent,
400 East Water St., Milwaukee, Wis.



With its thousands of miles of perfectly equipped road reaches the most important points in MINNESOTA, IOWA, WISCONSIN, NORTHERN MINNESOTA, MINNESOTA, NORTH AND SOUTH DAKOTA, NEBRASKA AND WYOMING.

SOLID VESTIBULED TRAINS

Between Chicago and St. Paul, Minneapolis, Council Bluffs, Omaha, Denver and Portland.

FREE RECLINING CHAIR CARS

Between Chicago, Council Bluffs, Omaha, Denver and Portland.

THROUGH SLEEPING CARS

Between Chicago and San Francisco without change.

SUPERB DINING CARS

For Tickets, Time Tables and full information apply to Agents

CHICAGO & NORTH-WESTERN R'Y.

Or address the Gen'l Pass. and Ticket Ag't at Chicago.

W. E. NEWMAN, J. M. WEITMAN, W. A. THERALL,
and Vice-Pres. Gen'l Manager. Gen'l Passenger and Ticket Agent

CHOICE OF 2 TRAINS

— VIA —

MONON ROUTE

— BETWEEN —

CHICAGO and
INDIANAPOLIS,
CINCINNATI,
CHICAGO,
LOUISVILLE,
AND ALL POINTS SOUTH.

Unsurpassed Pullman Car Service, FAST TRAINS. SURE CONNECTIONS.

SHORT ROUTE TO FLORIDA.

Be sure your tickets read via Monon Route (L. N. & C. Ry.), and your comfort is guaranteed.

For Maps, Guides, etc., address
JAMES BARKER,
Gen'l Pass'r Agent,
Monon Block, CHICAGO.

For Freight Rates call on or address,
M. HUNTER,
Commercial Agent,
Room 19, Mitchell Bldg., MILWAUKEE.

SEND for a copy of Cawker's American Flour Mill and Grain Elevator Directory for 1892-93.



RUN

Fast Trains with Pullman Vestibuled Drawing Room Sleepers, Dining Cars and Coaches of latest design, between Chicago and Milwaukee and Ashland and Duluth.

Through Pullman Vestibuled Drawing Room and Tourist Sleepers via the Northern Pacific Railroad between Chicago and Portland, Ore., and Tacoma, Wash.

Convenient Trains to and from Eastern, Western, Northern and Central Wisconsin points, affording unequalled service to and from Waukesha, Fond du Lac, Onkosh, Neenah, Menasha, Chippewa Falls, East Claire, Hurley, Wis., and Ironwood and Bessemer, Mich.

For tickets, sleeping car reservations, time tables and other information, apply to agents of the line or to Ticket Agents anywhere in the United States or Canada.

S. R. AINSIE, General Manager. CHICAGO, ILL.
J. M. HANNAFORD, Gen'l Traffic Mgr., ST. PAUL, MINN.
H. C. BARLOW, Traffic Manager. CHICAGO, ILL.
J. A. C. FORD, Gen'l Pass'r and Ticket Agt., CHICAGO, ILL.

MILWAUKEE, LAKE SHORE & WESTERN R'Y.

THROUGH

SLEEPING AND PARLOR CAR LINE

— WITH —

FAST TRAINS CHICAGO AND MILWAUKEE

— TO —

APPLETON, WAUSAU and ASHLAND

The Gogebic, Penokee and Montreal Iron and Mineral Ranges.

HURLEY, IRONWOOD, BESSEMER and WAKEFIELD.

The Manufacturing Centers and Lumbering Districts of

CENTRAL AND NORTHERN WISCONSIN,

SHEBOYGAN, MANITOWOC,

KAUKAUNA, APPLETON,

WAUBSAU, ANTIGO,

EAGLE RIVER and RHINELANDER

The only Line reaching the Celebrated Fishing Resorts of Northern Wisconsin and Michigan,

Gogebic, Tomahawk and Pelican Lakes,

RHINELANDER,

EAGLE WATERS,

TWIN LAKES,

LAKE VIEUX DESERT,

WATERSMEET.

The ONTONAGON, BRULE and other Trout Streams, Noted for their excellent Muskellunge, Bass, Pike, Pickerel and Trout fishing.

DIRECT LINE

Via New London Junction and O. R. & St. P. R. R.

— FOR —

SEYMOUR, GRAND RAPIDS and STEVENS POINT.

Via Ashland and Northern Pacific R. R.

— FOR —

Superior, West Superior, Duluth,

Pacific Coast and Intermediate Points.

Guide Books, Maps, Time Cards and full information furnished on application to the General Passenger Agent.

Milwaukee City Office, 102 Wisconsin St.

Chicago City Office, 208 Clark St.

H. F. WHITCOMB, C. L. RYDER,

General Manager. Gen'l Pass'r Agent.

MILWAUKEE, WIS.

EXPORTING millers should write to the Riverside Printing Co., Milwaukee, Wis., for the best Flour Cable Code ever published. There are more copies of this Code in use than of ALL other flour codes published. It is simple and accurate. It is called "The Riverside Flour Cable Code."

Cleveland, Cincinnati, Chicago & St. Louis RAILWAY.

BIG FOUR ROUTE

BETWEEN

CHICAGO

INDIANAPOLIS

CINCINNATI.

The only Line Running the

POPULAR BUFFET SLEEPING CARS

BETWEEN

CHICAGO AND CINCINNATI.

The Only Line from Chicago running Solid Vestibule Trains into Central Union Depot, Cincinnati, where connection is made with Through Car Lines for Florida, avoiding all disagreeable transfers.

Through Tickets via the Big Four Route can be procured at all Ticket Offices in the Northwest.

O. C. MURRAY, D. B. MARTIN,
Traffic Manager. Gen'l Pass'r Agent
CINCINNATI, O.

GRAND HAVEN ROUTE

D. G. H. & M. RY.

This Favorite Summer Route with its PALATIAL IRON STEAMERS CITY OF MILWAUKEE and WISCONSIN AND FIRST-CLASS TRAIN SERVICE IS NOW OPEN.

Fast Line to Grand Rapids, Muskegon, Saginaw and Points in Michigan and East.

Steamers leave MILWAUKEE daily (Saturday excepted) at 9:00 p. m., connecting at GRAND HAVEN with limited Express which leaves at 5:40 a. m., arrives at Grand Rapids 5:45 a. m., Saginaw 10:50 a. m., Detroit 11:50 a. m., Toronto 7:50 p. m., Niagara Falls 7:50 p. m., Montreal 7:45 a. m., New York 10:25 a. m., Boston 3:00 p. m.

Buffet Parlor and Sleeping Car Service

Tickets on sale at all coupon ticket offices; company's office, 99 Wisconsin St., and at dock, foot of West Water St.

JOHN W. LOUD, B. C. MEDDAUGH,
Traffic Manager. Passenger Agent,
Detroit. 99 Wisconsin St., Milwaukee

OCEAN.

White Star, Inman, Cunard, Anchor, Bremen, Hamburg, French, and all other lines.

Cabin plans and sailings sent by mail and rooms secured in advance.

Very Cheap Storage Rates, British ports and Milwaukee, \$31.50.

B. C. MEDDAUGH, Gen'l Steamship Agt.,
99 Wisconsin Street, Milwaukee.

BOOKS.

A PRACTICAL TREATISE ON MILL-Gearing Wheels, Shafts, Riggers, etc., for the use of engineers, with eleven plates. T. Box. Third edition. 12mo. \$3.00.

FIVE HUNDRED AND SEVEN MECHANICAL MOVEMENTS, embracing all those which are most important in Dynamics, Hydraulics, Hydrostatics, Pneumatics, Steam Engines, Mill and other Gearing, Presses, Horology and Miscellaneous Machinery. H. T. Brown. Sixteenth edition. 12mo. \$3.00.

A TREATISE ON MILLS AND MILL Work. W. Fairbairn. 8vo. \$3.75.

A MANUAL OF MACHINERY AND MILL Work. W. J. M. Rankine. Fifth edition, thoroughly revised by W. J. Miller, with nearly 900 illustrations. 12mo. \$3.00.

TEMPLETON'S ENGINEER, MILL-Wright and Mechanic's Pocket Companion, revised, corrected and enlarged from the Eighth English edition by Julius W. Adams. \$2.00.

A TREATISE ON FRICTION AND LOST Work in Machinery and Millwork. R. H. Thurston. 61 illustrations. 8vo. \$3.00.

AMERICAN MILLER AND MILL-wright's Assistant, by William Carter Hughes. 12mo. \$1.50.

THE MILLER'S, MILLWRIGHT'S AND Engineer's Guide, by Henry Pallett. Illust. 286 pages. 12mo. \$2.00.

PRACTICAL HINTS ON MILL BUILD-ing. By R. J. Abernathy. Illust. 8vo. \$1.00.

BOOKS.

Any of the books in this list will be sent by mail, free of postage, to any part of the world, upon receipt of price. Address and make all drafts payable to the order of THE UNITED STATES MILLER, 68-C Mitchell Bldg., MILWAUKEE, WIS.

GOODRICH STEAMERS

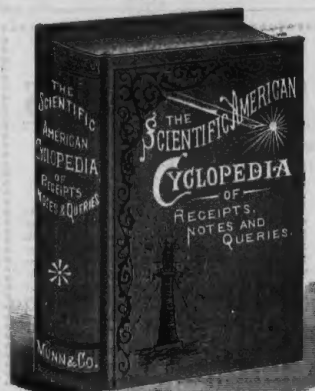
ON REGULAR TIME

LEAVE MILWAUKEE FOR

Chicago daily, Saturdays excepted, at 7:00 p. m.
Racine daily, Saturdays excepted, at 7:00 p. m.
Sheboygan daily, Sundays and Mondays excepted, at 7:00 a. m.
Manitowoc daily, Sundays and Mondays excepted, at 7:00 a. m.
Sheboygan on Sundays and Mondays at 7:00 p. m.
Manitowoc on Sundays and Mondays at 7:00 p. m.
Kewaunee and Ahnapee Saturdays at 7:00 a. m.
Thomas Forbes, G. Huron,
Passenger Agent. Sec. and G. T. M.

NOW READY!

A NEW AND VALUABLE BOOK.



12,000 Receipts, 680 Pages. Price \$5.

This splendid work contains a careful compilation of the most useful Receipts and Replies given in the Notes and Queries of correspondents as published in the Scientific American during the past fifty years; together with many valuable and important additions.

Over Twelve Thousand selected receipts are here collected; nearly every branch of the useful arts being represented. It is by far the most comprehensive volume of the kind ever placed before the public.

The work may be regarded as the product of the studies and practical experience of the ablest chemists and workers in all parts of the world; the information given being of the highest value, arranged and condensed in concise form convenient for ready use.

Almost every inquiry that can be thought of, relating to formulae used in the various manufacturing industries, will here be found answered.

Those who are engaged in any branch of industry will probably find in this book much that is of practical value in their respective callings.

Those who are in search of independent business or employment relating to the home manufacture of sample articles, will find in it hundreds of most excellent suggestions.

By mail postpaid to any part of the world upon receipt of price. Address and make all remittances payable to order of

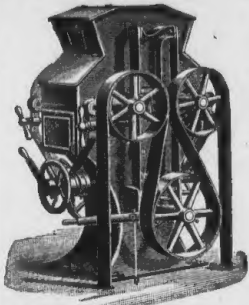
THE UNITED STATES MILLER,
68-C Mitchell Building. Milwaukee, Wis.

CLUB LIST.

We can furnish the UNITED STATES MILLER with any of the following papers or periodicals, for one year, at prices named the money to accompany the order:

Harper's Monthly and United States Miller	425
Harper's Weekly and United States Miller	425
Harper's Bazar, weekly, and United States Miller	425
Harper's Young People, monthly, and United States Miller	250
Century, monthly, and United States Miller	450
St. Nicholas, monthly, and United States Miller	350
Scribner, monthly, and United States Miller	340
Scientific American, weekly, and United States Miller	450
Stationary Engineer, weekly, and United States Miller	200
And other publications at reduced rates.	

ADDRESS
UNITED STATES MILLER,
MILWAUKEE, WIS.



THE KEYSTONE

4 ROLLER WHEAT MILL.

Flour Mills. * Corn Mills. * Hominy Mills.

DON'T

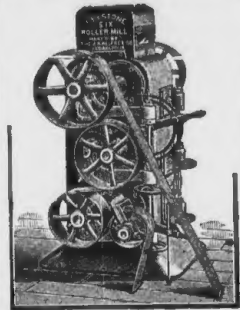
Build a new mill;
Increase your capacity;
Have your rolls reground or recor-
rugated;
Buy even a pulley, a belt, or a piece
of bolting cloth,

• • UNTIL YOU WRITE US. • •

WHY?

Because we will give you first-class
work and prompt attention.
Because we will treat you fairly on
prices.
Because we have the best and most
effective line of machinery.
Because we guarantee satisfaction
in every particular.

AND WE WANT TO HEAR FROM YOU.



THE KEYSTONE

6 ROLLER CORN MILL.

Address, THE J. B. ALLFREE MFG. CO., 12th St. and Michigan Road,
INDIANAPOLIS, IND.

Cawker's American Flour Mill and Grain Elevator Directory

FOR 1892-1893

Contains: 1. A list of Flour Mills in each State, Ter-
ritory and Province, with names of owners, P. O. and county;
in thousands of instances giving their capacity in barrels per
day, kind of power used, etc., also indicating such firms as
are supposed to be worth \$10,000 and upwards. Total num-
ber of mills given, about 18,000.

2. A list of miscellaneous mills, such as Corn, Oatmeal, etc.
3. A list of Millwrights.
4. A list of Grain Elevator Owners and Grain Dealers.

The price is invariably Ten Dollars per Copy, on receipt of which it will be sent, post paid, to any part of the world. The complete work only is sold. We do not supply lists for single states. These Directories have been issued every two years since 1878, and have been declared indispensable by the prominent mill-furnishers, flour brokers, millers, etc., of this country and Europe. Address,

UNITED STATES MILLER, 68-C Mitchell Building, Milwaukee, Wis.

MANUFACTURING SITES FOR SALE!

THE undersigned owns a few of the best manufacturing sites in the city of Milwaukee, adjoining those now occupied by the Milwaukee Car Wheel and Foundry Co. and the magnificent plant of the Fuller-Warren Stove Works, which cover nearly ten acres of ground. Best of railroad facilities. Parties desiring a suitable location should investigate this. Address, _____

E. HARRISON CAWKER,

36 & 37 LOAN & TRUST BLDG.

MILWAUKEE, WIS.



BURNHAM'S

NEW IMPROVED
STANDARD TURBINE.

It gives on either a Vertical or Horizontal shaft more power for its price, yields a greater percentage for water used, either with full or part gate drawn, and is the simplest, most durable and best finished wheel made. Send for illustrated catalogue and state head of water and power required.

BURNHAM BROS., YORK, PA.

Percentage:
Full Gate - 84
3/4 " - 83
1/2 " - 82

ESTABLISHED 1856.



DRAWBACK ON BAGS COLLECTED.

R. F. DOWNING & CO.,

NEW YORK.



"WESTERN" MILL SHELLER.

The Most Compact, Durable,
Best Sheller and Best Cleaner.

Takes up but little room, runs at low rate of speed, requires no attention. It is in every respect the

Best Sheller ever offered to the Public

Please mention this paper.

Write for full particulars to

UNION IRON WORKS,

Manufacturers of "Western" Shellers, Cleaners, Separators, and all kinds of Elevator Machinery.

DECATUR, ILL.



BRANCH HOUSE, 1495 EAST MAIN ST., RICHMOND, VA.

Don't forget to mention this paper when you write.

THE NEW ERA SCALPER



MANUFACTURED BY

Superlative Purifier Mfg. Co.,

MILWAUKEE, WIS.

The Largest Minneapolis Mills

And the smallest custom mills, as well as mills of intermediate capacity, are using this machine, and find it an improvement over old style scalpers.

Long system, short system, winter wheat, spring wheat—it makes no difference. This scalper will do splendid work in any of them. You can do the best milling without sieve scalpers, and The New Era is the Best.

Prices are low, terms favorable, and guarantee strong.

WRITE US.

SUPERLATIVE PURIFIER MFG. CO.
MILWAUKEE, WIS.

VORTEX



**DUST
COLLECTOR**

Going to Put in Dust Collectors This Fall?

REMEMBER, we make the best Collector on the market; sell them at reasonable prices; guarantee satisfaction and allow trial.

This collector is used and recommended by nearly every mill furnisher in the country. Over three thousand in use and giving satisfaction.

DROP US A LINE.

VORTEX DUST COLLECTOR CO.,
MILWAUKEE, WIS.